STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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CULBERT L. OLSON, Governor
FRANK W. CLARK, Director of Public Works
EDWARD HYATT, State Engineer

BUTTE CREEK ADJUDICATION

—o—

REPORT ON
WATER SUPPLY AND USE OF WATER
ON
BUTTE CREEK AND TRIBUTARIES
ABOVE THE WESTERN DAM

BUTTE COUNTY, CALIFORNIA

March, 1940

STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
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Sacramento, California
March 11, 1940

Mr. Harold Conkling
Deputy State Engineer
Sacramento, California

Dear Sir:

The accompanying "Report on Water Supply and Use of Water on Butte Creek and Tributaries above the Western Dam, Butte County, California", is submitted herewith for your approval.

This report has been prepared pursuant to the order entered by the Division of Water Resources on June 15, 1939, granting the petition of Durham Mutual Water Company, Ltd., A. F. Lieurance, E. L. Adams and R. C. Gorrill for a determination of the relative rights of the various claimants to the waters of Butte Creek and its tributaries above the Western Dam. The purpose of this report is to present engineering data relative to the water supply and water requirements of the lands involved in the above mentioned proceeding, which data were collected during a field investigation made under the supervision of the undersigned.

The field investigation covered the period extending from July 20 to October 10, 1939. The investigation included measurements of the water supply and of the various diversions from the stream system, a study of the duty of water on the irrigated lands and supplemental surveying of the diversion systems and irrigated areas.

Certain data relative to water supply, climate, soils and irrigated areas, previously collected by the Division of Water Resources and various federal agencies, which are pertinent to the purpose of this report have been included herein.

A map consisting of six sheets showing the stream courses, the conduits diverting water therefrom, lands irrigated and capable of being irrigated by each conduit, and the kind of culture upon the irrigated land on Butte Creek and its tributaries above the Western Dam on a scale of one inch to 4400 feet and a soil map consisting of four plates on the same scale have been prepared and are submitted as a part of this report.

Respectfully submitted,

GORDON ZANDER
Supervising Hydraulic Engineer

BEFORE THE DIVISION OF WATER RESOURCES

DEPARTMENT OF PUBLIC WORKS OF THE STATE OF CALIFORNIA

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IN THE MATTER OF THE DETERMINATION OF THE RIGHTS OF THE VARIOUS CLAIMANTS TO THE WATERS OF THAT PORTION OF BUTTE CREEK AND ITS TRIBUTARIES SITUATE ABOVE THE WESTERN DAM NEAR NELSON, IN BUTTE COUNTY, CALIFORNIA.

I, Harold Conkling, Deputy in Charge of Water Rights, Division of Water Resources, Department of Public Works of the State of California, hereby approve the within contained report entitled "Report on Water Supply and Use of Water on Butte Creek and Tributaries above the Western Dam, Butte County, California", dated March 11, 1940.

Dated this 12th day of March, 1940.

HAROLD CONKLING
Deputy State Engineer in Charge
of Water Rights.

I, Edward Hyatt, State Engineer and Chief of the Division of Water Resources, Department of Public Works, State of California, hereby approve and adopt the within contained report entitled "Report on Water Supply and Use of Water on Butte Creek and Tributaries above the Western Dam, Butte County, California", dated March 11, 1940, as the report of the Division of Water Resources in the above entitled proceeding.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 13th day of March, 1940

EDWARD HYATT
State Engineer and Chief of the
Division of Water Resources,
Department of Public Works,
State of California.

(Seal)

ORGANIZATION

Frank W. Clark	Director of Public Works
Edward Hyatt	State Engineer
Harold Conkling	Deputy State Engineer in Charge of Water Rights

This report was prepared under the direction of

GORDON ZANDER

Supervising Hydraulic Engineer

By

T. Russel Simpson	Senior Hydraulic Engineer
J. W. McPartland	Delineator and Draftsman
J. Victor Scammon	Watermasters' Assistant

INTRODUCTION

Petitions for determination, in accordance with the provisions of Sections 25 to 36g of the Water Commission Act, of the rights of the various claimants in and to the use of the waters of Butte Creek and its tributaries above the Western Dam near Nelson, in Butte County, were filed in the office of the Division of Water Resources on June 15, 1939. The petitions were signed by the directors of Durham Mutual Water Company, Ltd., A. F. Lieurance, E. L. Adams and R. C. Gorrill.

Upon investigation, the Division of Water Resources found the facts and conditions to be such that the public interest and necessity would be served by the determination sought. The Division of Water Resources accordingly granted the petition and thereafter duly gave notice by publication setting forth the pendency of the proceeding and specifying that the examination of the stream system would be commenced on July 20, 1939.

A conference of the water users involved in the proceeding was called by the Division of Water Resources at Durham on July 19, 1939. The meeting was called for the purpose of explaining the steps in the adjudication procedure and to make arrangements for an expeditious investigation. The field examination was commenced on the following day and extended through to October 10, 1939.

The case of Central California Investment Company vs. John Crouch Land Company, et al., was instituted in the Colusa County Superior Court in 1911 and was transferred for trial to the Sutter County Superior Court in May, 1916. Most of the claimants at that time to the waters of Butte Creek and its tributaries were included in this action. This litigation was finally settled by a decree of the court on May 25, 1920. The decree was based upon

a stipulation for judgment which made an allocation of 108 cubic feet per second of the natural flow of Butte Creek and of all the foreign waters conveyed into Butte Creek from the West Branch of Feather River. A copy of the decree is included at the end of this report as Appendix II.

Twenty-six water rights have been initiated on Butte Creek and its tributaries above the Western Dam by filings under the provisions of the Water Commission Act in addition to the rights set forth in the above mentioned decree. Certain of the rights set forth in the above mentioned decree were not used during the period of the investigation.

At the above mentioned conference on July 19, 1939, it was moved by Mr. White and seconded by Mr. Lieurance that the resident engineer of the Division of Water Resources, in charge of the adjudication investigation, be authorized to regulate the diversions from Butte Creek in accordance with the above mentioned decree for the period July 20 to October 1, in 1939 only, it being understood that the legal rights of no claimant would be prejudiced by such distribution. The motion was carried unanimously. In accordance therewith supervision was exercised over the diversions incidental to the investigation.

The water users on Little Butte Creek on July 29, 1939 agreed to a schedule of rotation in the use of the water in that stream during the period from July 31 to September 30, in 1939 only, as an incident of the investigation. A memorandum of this rotation agreement is hereinafter submitted as Appendix III.

GENERAL DESCRIPTION OF WATERSHED

Butte Creek has its source above Jonesville and Butte Creek House on the west slope of the Sierra Nevada mountains in the northeasterly portion of Butte County between the Humbug and Humboldt Passes. The Humbug Pass has an elevation of 6660 feet and the Humboldt Pass 6649 feet. The channel of Butte Creek follows a general southwesterly direction for approximately fifty miles down to the inflow from the Western Canal at the Western Dam. The entire watershed of Butte Creek above the Western Dam is under consideration in this report.

Butte Creek has two important tributaries, namely, Little Butte Creek and Hamlin Slough. Little Butte Creek is tributary to Butte Creek from the east about nine miles above and northeast of Chico. Hamlin Slough empties into Butte Creek from the east a short distance above the Western Dam.

Foreign water is transported from the West Branch of Feather River by means of the Hendricks Canal through the DeSabla Reservoir and Power House into Butte Creek. The foreign water is conveyed down the natural channel of Butte Creek to the intake of the Centerville Canal, thence down the Centerville Canal through the Centerville Power House and on down Butte Creek to the Parrott Dam. The foreign water is all rediverted at the Parrott Dam through the Parrott Ditch.

The DeSabla Reservoir is situated on the ridge between Butte Creek and Little Butte Creek above the DeSabla Power House. It has a capacity of about 60 acre-feet and is utilized to regulate, in accordance with the power demands, the foreign water conveyed from the West Branch of Feather River through the Hendricks Canal.

The Magalia Reservoir has been constructed on Little Butte Creek

by the Paradise Irrigation District. It has a present capacity of 3,400 acre-feet.

The total area of the watershed of Butte Creek above the U.S.G.S. station situated immediately below the inflow of Little Butte Creek is approximately 148 square miles. The U.S.G.S. station has an elevation slightly over 500 feet. The watershed area above elevation 2500 feet is approximately 109 square miles.

Hamlin Slough heads southwest of Paradise at an elevation of about 1600 feet. The natural flow from this watershed is limited to the period covered by the rainy season. The drainage from most of the irrigated lands in Durham Colony is into Hamlin Slough.

Nearly all of the irrigated land in the stream system lies below the Magalia Reservoir on Little Butte Creek and below the Parrott Dam on Butte Creek. There are several small irrigated tracts and uses for mining and domestic purposes above these points. Practically all of the dry-weather flow of Butte Creek above Little Butte Creek is utilized for the generation of hydroelectric energy at the DeSabla and Centerville Power Houses.

The dry-weather flow of Little Butte Creek is all consumed above its confluence with Butte Creek. There are perennial springs at the headwaters of Butte Creek which produce a minimum dry-weather flow of more than forty cubic feet per second. The snow crop in the Butte Creek watershed normally causes a fairly well sustained flow until the end of June.

CLIMATE

The predominating feature of the climate in the Butte Creek stream system, in common with the Sacramento Valley, is the long growing season. Other climatic characteristics are abundance of sunshine, high summer temperatures, and moderate humidity and rainfall. The precipitation is generally confined to the fall, winter and early spring. More than ninety per cent of the total preciptiation normally occurs between October 1 and April 30. These climatic features indicate the supreme importance of irrigation for the successful production of crops in this area.

Summaries of the records of rainfall data that have been collected by the U.S. Weather Bureau at Chico during the past nine years, and the 69-year mean are hereinafter presented in Table 4. Table 5 contains a summary of the temperature records at Chico.

It may be noted in Table 4 that the total precipitation at Chico for the seasonal year 1938-1939 was 14.65 inches or 61 per cent of the mean total precipitation. The records submitted in this table also show that during the four year period from 1936 to 1939, that 1939 was extremely dry, 1938 was very wet, and the rainfalls in 1936 and 1937 were close to normal, although the snow crop in 1936 was extremely deficient.

The temperature records submitted in Table 5 indicate the moderate temperature that prevails over the irrigated area in the stream system. The monthly mean minimum temperature exceeds 40 degrees during the period from March to October, inclusive. The monthly mean maximum temperature exceeds 73 degrees during the period from April to October, inclusive, and the monthly mean for this period exceeds 60 degrees. The highest recorded temperature at Chico in a 69 year record was 117 degrees and the lowest was 11 degrees, a

range of 106 degrees. The difference between the annual mean maximum and mean minimum temperatures in the past 25 years has been less than 30 degrees.

The records that have been kept of the dates of killing frosts at Chico have been tabulated in Table 6. These indicate an average length growing season of 233 days, the average extending over a period from March 26 to November 14. This long growing season allows a wide diversification of irrigated crops.

Snow survey records have been kept at Mt. Stover and Humbug Summit immediately east of the headwaters of Butte Creek since 1931. A summary of the records has been included in Table 7. Table 7 also contains records of measured natural flow of Butte Creek at the U.S.G.S. station above the Bridge Bridge during the past 9 years for the period from April 1 to July 31. The mean water contents of the snow on the two courses have been deduced from water supply records in the adjoining Feather River watershed.

The mean natural flow or water crop of Butte Creek and its tributaries above the Covered Bridge as deduced from the snow survey records set forth in Table 7 for the period from April 1 to July 31 is 100,000 acre-feet. The seasonal run-off factor from the snow survey data indicates that the run-off during the 1939 season was 37 per cent of normal, the 1938 season was 163 per cent of normal, the 1937 season was 115 per cent of normal, and the 1936 season was 62 per cent of normal.

CROPS

A wide variety of irrigated crops are grown in the Butte Creek stream system due to the long growing season and fairly well sustained dry-weather water supply. The various irrigated crops in the Butte Creek stream system have been grouped into eight classes and are designated by letters on the Division of Water Resources map submitted herewith as follows:

a - alfalfa, clover and sudan grass
g - all grains and egyptian corn
o - orchard and vines
t - garden truck, beans, peas, field corn and beets
r - rice
mp - meadow pasture
p - irrigated pasture
nc - fallow land with no crop in 1939

The largest acreage in the above classes is that devoted to the production of rice. The cultivation of this crop is limited by soil conditions to the Adams, Gorrill, Crouch, Goodspeed, Parrott, and M. & T., Inc. Ranches, and to the lands irrigated under the Western Canal.

Under normal precipitation conditions one irrigation is all that is ordinarily required to mature grain and egyptian corn.

The pasture land consists largely of fallow rice land. The meadow land is confined to small scattering areas in the headwaters of the stream system.

There are numerous orchard and garden tracts in the vicinity of Durham and Paradise. The principal orchard crop at Durham consists of almonds. A wide variety of fruit is grown in the Paradise Irrigation District.

RUN-OFF RECORDS

The standard method of collecting run-off records was used in the investigation. This consisted in the selection of a measuring station with a control of a permanent character. The station was equipped with a staff gage and an automatic water stage recorder which gave a continuous record of gage heights.

Sufficient current meter measurements were made at each station to prepare a rating curve for same, and the records of gage heights for the various stations were applied to the respective rating curves to determine the corresponding discharge. All discharges obtained have been shown in tables included with this report, and are expressed in cubic feet per second. Multiplication by fifty converts cubic feet per second into miners inches under a four inch pressure, which is a common unit of measurement in this vicinity.

1. Butte Creek

The U.S.G.S. station located between the Covered Bridge and the confluence of Butte and Little Butte Creeks was used to determine the total water supply of Butte Creek available for the rights defined in the decree in the case of Central California Investment Company vs. John Crouch Land Company, et al. The discharges at this station for the period June 1 to September 30 during the years 1936 to 1939, inclusive, have been tabulated in Tables 8, 9, 10 and 11 of this report. The records submitted in these tables are shown graphically on the hydrographs hereinafter depicted on Plate 5.

An automatic water stage recorder was installed in Butte Creek at the Wakefield Pump below the Chico-Oroville Road on June 27, 1939. The discharge at this station represents the quantity of water available for diver-

sion through the Colony Lower Ditch. The discharge at this station during the period from June 27 to September 30, 1939 has been tabulated in Table 12.

2. Little Butte Creek

An automatic water stage recorder was installed on August 5, 1939, on Little Butte Creek above the Magalia Reservoir. The entire dry-weather flow of Little Butte Creek at this point is stored in the Magalia Reservoir and released through the irrigation system of the Paradise Irrigation District. The discharge at this station has been tabulated in Table 13.

The entire flow of Little Butte Creek below the Evers Ranch was kept together in one irrigation head in August and September, 1939, and was diverted through either the Burke Ditch or the McLain Ditch. The flow available at the heads of these two ditches during the two-month period has been tabulated in Table 14. This flow was derived entirely from tributaries below the Magalia Reservoir.

3. Foreign Water

An automatic water stage recorder was installed on June 21, 1939, in the Hendricks Canal above its junction with the Butte Creek Canal. The flow at this station represents the foreign water prior to regulation in the DeSabla Reservoir delivered into the Butte Creek stream system from the West Branch of Feather River. This flow is subject to regulation in the DeSabla Reservoir. The discharge at this station during the period from June 21 to September 30, 1939 has been tabulated in Table 15. A radio register was installed at this station on August 16, 1939.

A summary of the delivery of foreign water into the Butte Creek stream system during the years 1931 to 1938, inclusive, is hereinafter submitted in Table 16.

Discussion

The deduced normal natural run-off of Butte Creek above the Covered

Bridge for the period April 1 to July 31 is approximately 100,000 acre-feet. The natural run-off during this period in 1939 was about 42 per cent of normal, as set forth in Table 7. Although the precipitation for the seasonal year October 1, 1938 to September 30, 1939 was 61 per cent of the mean precipitation, the water content of the snow showed a run-off factor of 36.7 per cent of normal.

The daily discharge in cubic feet per second of Butte Creek at the U.S.G.S. station above the Covered Bridge after deducting 95 per cent of the foreign water inflow from the Hendricks Canal after regulation in the DeSabla Reservoir has been tabulated in Table 17. The amounts set forth in Table 17 were used as the bases for calculating the percentage of allotments to be delivered under the decree in the case of Central California Investment Company vs. John Crouch Land Company, et al., during the period of the field investigation.

SOIL CLASSIFICATION

A soil survey of the Chico Area, California, was made by the Bureau of Chemistry and Soils of the United States Department of Agriculture in co-operation with the Agricultural Experiment Station of the University of California in 1925.

The Butte Creek stream system comprises the middle portion of the Chico area which lies in the northerly portion of the Sacramento Valley basin in the vicinity of the City of Chico. The area under consideration extends from the Sacramento River on the west to the non-agricultural mountainous lands to the east and north. The western portion of the area lies in the flood plain common to both the Sacramento River and Butte Creek. The marginal belt of foothills on the east side consists largely of lava flows sloping southwest toward the valley. This slope has been eroded deeply in places to form the stream channels draining the area. Comparatively level table land ridges lie between the canyons. The Paradise district lies on one of these table land ridges at an elevation of about 2500 feet above sea level. The valley land of the area varies in elevation from about 100 to 300 feet.

The soils in the area have been classified into two major groups on the basis of the accumulation of the parent unconsolidated soil materials as follows:

(1) Soils derived from materials accumulated by the decomposition, in place, of consolidated rocks.

(2) Soils derived from materials accumulated by deposition from water.

The soils of the first group are designated as residual soils. The residual soils have developed from igneous and lava rock laid down by successive periods of volcanic activity, with intervening periods of weathering and

erosion. Much of the material is tuffaceous and varies in character from hard, massive, and resistant to weathering to soft and feeble consolidation. Portions of the materials represent volcanic mud flows which collect boulders and cobbles in their movement with sufficient subsequent weathering until now the surface is covered with the harder stone fragments from the mass. The soils of the scab land comprising most of the foothill area and portions of the tableland in the Butte Creek area have been formed by decomposition in place of this underlying material. Much of the soil has been removed by erosion leaving only the stony fragments and a shallow layer of soil, except in the Paradise section where slow erosion has allowed a deep layer of soil to accumulate.

The soils of the second group formed by the deposition of material transported by water are generally referred to as the valley-filling soils. The older valley-filling material was laid down by deposition and subsequently subjected to weathering and some erosion. There are usually well defined layers of compaction in the deposit with relatively large accumulations of colloidal silt and clay through the surface layers of the mass. These old valley-filling soils appear in the Butte Creek area on the lower portions of the flood plain between the more recent alluvial deposits near the foothills and the flood plain along the Sacramento River. The surface and subsurface drainage are both poor in this area due to its level contour and heavy impervious soils. The more recent valley-filling soils are composed of the alluvial material deposited along the upper portions of the flood plans by the streams during the freshet season. This material varies from the clay loams, through the loams and sandy loams to the more gravelly deposits found immediately adjacent to the stream channels near the foothills. This group of soils is still actively building up and includes a major portion of the

more highly valued agricultural land within the area. The soils in the vicinity of Chico, Durham and Dayton are of this type, and were built up as the detritus fan of Butte Creek. A strip of land varying in width from one-half to two miles along the Sacramento River is also of this more recent alluvial deposit.

The soils in the area have also been classified into five general types according to their texture and structure. The location of these soil types are shown on the soil maps submitted as Plates 1, 2, 3 and 4, at the end of this report are hereinafter discussed in detail. The five general texture types into which all the soils in the area have been grouped are as follows:

(1) clay adobe
(2) clay
(3) clay loam
(4) loam
(5) sandy loam and gravelly loam

Soils in Group (1) are composed of more than 70 per cent of fine silt and clay in the surface layer. This layer is from one to three feet in thickness and is underlaid by subsurface layers which contain less silt and more clay with some clay loam present. The surface soil varies in color from black to brown and sometimes has a dull gray color. The subsurface soils are generally lighter in color than the top soil due to a lesser organic content. The soil acts in the manner characteristic of adobe soils in that it is sticky and plastic when wet and when dry cracks into large blocks with a tendency to form hard clods. The soil is difficult to cultivate but holds moisture well and is rich in organic matter.

These soils lie in flat areas on the outer fringes of overflow basins and have been largely laid down from the deposits of fines carried in suspension by the overflowing waters. The surface drainage is from poor to

fair depending upon the slope of the land and the subsurface drainage is poor.

The soils of this type were developed as grain growing areas when originally settled but constant cropping reduced their usefulness for this crop and in recent years they have more generally been used for rice growing for which they are well adapted. Rotation between grain and rice is now the common practice over the area.

Soils in Groupo (2) are composed of less than 70 per cent of fine silt and clay in the surface layer. This layer is from 15 to 36 inches in thickness and is underlaid by subsurface layers which are of a lighter texture containing some clay loam and in some cases very fine sand. The surface soil varies in color from dark brown to a chocolate brown. The subsurface soils are generally lighter in color than the top soil.

The soils classed in this group vary from the predominately clay type which is fairly easily cultivated with fair surface drainage to a type which shows adobe characteristics such as poor surface drainage, stickiness when wet and cracking badly when dry. Both types have poor subsurface drainage and are only adapted to shallow-rooted crops. The clay soils along the edge of the overflow basin of the Sacramento River and the area southeast of Durham are well adapted to both grain and rice.

The soils of this type were deposited in a manner similar to the clay adobe types on overflowed lands. The flood waters must be sufficiently restrained to allow deposit of the fines carried in suspension after coarser materials have been deposited above.

The soils have a fair amount of organic matter and good moisture retention, although some difficulty is experienced in securing penetration of irrigation water where other than shallow-rooted plants are grown.

Soils in Group (3) fall into two classes according to their formation. The first class to be considered has been formed by water deposits on

the edges of the detritus cones in the area. These types are of a brown or a chocolate brown color throughout the surface layer which extends from two to three feet below the ground surface. The subsoil is similar to the surface soil but is generally of a lighter color. The soils are granular, fairly friable and have a good supply of organic matter. The surface of the soils of this class are generally level and smooth with resultant poor surface drainage. The subsurface drainage is also poor.

The soils are well suited to irrigation for general farm crops as their smooth surface and moisture retention qualities make the application of water a simple matter. The land is largely cropped to grain although some of the area is utilized for pasture and a portion, east of Durham, is planted to fruit trees.

The second class in Group 3 has been formed by the weathering of the tuffaceous material upon which it rests. This type is reddish brown in color grading into almost a red in the subsoil. The surface soil is granular and rich in organic matter. The subsoil although of heavy texture is readily permeable to water and to tree roots to depths of 6 to 20 feet. In some portions of the area, in which this type of soil is found, boulders of various sizes are scattered through the layers of soil making cultivation difficult. Surface drainage is good as the soil occurs on sloping hillsides and rounding slopes. The subdrainage is also good.

The principal body of this reddish phase of clay loam is in the Paradise district where it is largely cropped to fruits and truck.

Soils in Group (4) are of a brown, rich-brown or chocolate brown color for a depth of two to three feet. The subsoil to a depth of six feet or more is typically similar to the surface soil but is generally lighter in color. The soils are friable and granular, well supplied with organic matter,

and of good water retention quality.

The flood plains of the streams in this area are largely made up of these soils. The surface contour is gently sloping and smooth with occasional old stream channels which assist in providing good surface drainage. Due to the permeability and depth of the soil, subsurface drainage is also good.

The soils in this group are the predominating type in the Butte Creek area and are the most valuable for general crops as they are well suited to grains, orchards, alfalfa and truck crops. Much of the area between Durham and Chico is owned in small holdings of ten to twenty acres, which are intensively farmed. Another large area of the soils is found along the Sacramento River on the Rancho de Farwell and the Rancho Llano Seco. This latter area is not yet fully developed. Portions have been cleared and planted to alfalfa and grain, both of which show good yields.

Soils in Group (5) are of a brown to grayish-brown color for a depth of two to three feet. The subsoil to a depth of six feet or more is of a type similar to the topsoil but is lighter in color. The soils are friable and granular with a fair amount of organic matter. The sand and gravel content varies in different locations and at different depths due to the uneven deposition of the soil building materials. The area occupied by this type is gently sloping and smooth in contour, making irrigation easy. The porosity of the soil makes it necessary to apply water for irrigation more frequently than is necessary on the loam soils. Surface drainage over a portion of the soils is only fair but subsurface drainage is good.

This type of soil occurs along the channels of Butte Creek and other creeks in the area where it is closely associated with the loam soils. The same crops are grown on the soils of this type as on the soils hereinbefore described under Group 4.

USE OF WATER

The waters of Butte Creek and its tributaries are used for domestic, stock-watering, irrigation, mining, industrial and power purposes. The total area receiving irrigation water embraces 50,416 acres, of which 40,487 acres receive supplemental water from other sources. Butte Creek is one of the sources of water supply for the DeSabla and Centerville power plants which have a combined rated capacity of 19,400 kilovolt-amperes.

It is the usual practice over almost the entire area to divert and spread water directly over the irrigated land by means of artificial diversion systems. However there are some small tracts, particularly old almond orchards, which are irrigated by seepage where the subsurface soil conditions are suitable for the spreading of moisture to adjacent lands. The latter method of irrigation is designated as subirrigation.

Aerial photographic reproductions of the 1937 survey made by the U.S. Department of Agriculture were used as a base in the preparation of a map by the Division of Water Resources showing the entire area included under the adjudication with the exception of the area irrigated under the Western Canal. The photographic reproductions were supplemented by such surveying as was necessary to show the courses of the streams, the location of each conduit diverting water therefrom, land irrigated and capable of being irrigated by each conduit, and the kind of culture upon the irrigated land. The results of these surveys have been combined into a map consisting of six sheets covering the entire area on a scale of one inch to 1320 feet.

The diversion points of the various conduits diverting from Butte Creek and its tributaries have been indicated on the map by numbers 1 to 66, inclusive. The uppermost diversion is numbered 1 and the numbers run thence

consecutively downstream on the various tributaries in order from north to south down to Little Butte Creek. These are followed by the diversion numbers on Butte Creek from 36 above Butte Meadows to 63 at the Western Dam, followed by the diversions on Hamlin Slough.

The areas irrigated or subirrigated under the various diversion systems, as shown on the six map sheets, were computed by the use of a planimeter. An acreage table entitled, "Description of Areas Irrigated from Butte Creek and its Tributaries", is hereinafter submitted as Table 1. This table has been prepared from the data contained on the map sheets and shows the ownerships, the number of irrigated acres and the descriptions thereof. The use of water under the various diversion systems is hereinafter further discussed in Appendix I entitled, "Description of Diversion Systems".

Records were kept of the disposition of the flow of Butte Creek below the U.S.G.S. Station near the Covered Bridge during the period of the investigation. These records are hereinafter submitted in Tables 12 and 18 to 21, inclusive. Records of flow in the Nimshew Ditch from August 1 to October 4, 1939, are tabulated in Table 22. The number of the table pertaining to each diversion is given under the description of that diversion in Appendix I.

Whenever practical, measurements were made on the ditches for the purpose of determining the flow normally used for irrigation and the flow required to fill the ditch to capacity. These measurements are hereinafter referred to as the "Normal irrigation head" and the "Maximum capacity", respectively, of the conduit. The measurements were made near the heads of the respective ditches.

The discharge measurements were made either with a current meter rated by the U.S. Geological Survey at the Bureau of Standards in Washington,

D.C., with temporary weirs, or were computed by extending the area-velocity relationship of measured flows.

METHODS OF IRRIGATION

Various methods of irrigation are in general practice on the lands served with water from Butte Creek and its tributaries, such as contour checks, strip or border checks, basin checks, furrows, wild flooding and subirrigation.

Subirrigation is limited largely to the areas peculiarly adapted to this method by the surface and subsoil structures. The surface soil must be reasonably porous to permit lateral movement of water and the subsoil should be impervious, close to the root zone of the plants and comparatively level. Limited mountain meadow tracts in the upper reaches of the stream system and old almond orchards in the Durham area are irrigated by subirrigation.

Wild flooding from ditches down ridges and from contour ditches is practiced on Little Butte Creek, in the Nimshew area, and on isolated mountain meadows in the headwaters of the stream system. This method consists of the release of water at various points along the ditch and the water is allowed to spread at random over the irrigated land.

All of the rice land and a small amount of clover and orchards, embracing an area of almost 20,000 acres, are irrigated with contour checks. Basin checks are confined to orchard irrigation and strip checks are in general use on the alfalfa land.

Vines, garden truck, field corn and beans and grain are generally irrigated by the furrow method. This method is also used to some extent in orchard irrigation.

DUTY OF WATER

The use of water on Butte Creek and its tributaries may be divided into consumptive and non-consumptive uses. The consumptive uses are those for domestic, stock-watering, irrigation and industrial purposes. The non-consumptive uses include those for mining and power purposes.

Almost the entire flow of Butte Creek above the Centerville Power House was continuously utilized by the Pacific Gas and Electric Company during the period of the investigation for the generation of hydroelectric energy at the DeSabla and Centerville power plants. Summaries of the physical data on these plants are hereinafter set forth in Tables 23 and 24.

The gross uses of water during the period of the investigation under the Nimshew, Burke and McLain Ditches and under all diversions from Butte Creek below the Covered Bridge for irrigation purposes have been hereinafter tabulated in Table 25. In Table 25 the use of water is expressed both in acre-feet per acre and in acres irrigated per cubic foot per second.

The high gross use of water indicated in Table 25 under the Nimshew, Burke and McLain Ditches is due to transportation losses of more than one-half of the gross diversions.

The Parrott Investment Company and M. & T., Inc. pumped 6424 acre-feet of water from the Sacramento River between July 1 and September 30, 1939, to supplement the supply received under Diversion 50. The combined diversion for 5000 acres was thus 15,714 acre-feet or a rate of combined gross use of one cubic foot per second to each 66 acres of irrigated land for the 105-day period. This included 700 acres of rice which it was noted required an irrigation head of about 22 cubic feet per second or a duty of one cubic foot per second for each 32 acres of rice. The combined gross use on the remaining

4300 acres under the system was at a rate of one cubic foot per second to 80 acres.

There was an additional area of 108.6 acres of almonds under the Marybill Ditch which received benefit from subirrigation that has not been included in Table 25 with the 300.0 acres on which water was directly applied. The amount of subirrigation was not susceptible of measurement but the actual duty of water was doubtless somewhat higher than the indicated use of one cubic foot per second to 63 acres.

The Durham Colony irrigation system served 6177 acre-feet of water directly to 2873.8 acres during the period from July 1 to September 30, 1939. In anticipation of a dry year, there were more than 900 acres not planted to any crop in Durham Colony in 1939. There was a slight shortage of water for the area irrigated during the period of investigation with a rate of use of one cubic foot per second to 85 acres.

Drainage occurred intermittently during the period of the investigation from Durham Colony lands into Hamlin Slough. The entire flow in Hamlin Slough and all waters in Butte Creek at the Adams Dam were diverted and used on the Adams and Gorrill lands. The waters were supplemented with pumping from wells to maintain flows of about 40 cubic feet per second to the Adams lands and about 20 cubic feet per second to the Gorrill lands. Any drainage reaching the Western Dam was diverted through the Western Canal onto the west side of Butte Creek.

FLUCTUATIONS IN FLOW

The flow of Butte Creek is subject to natural daily fluctuations, variations due to regulation of the foreign waters in the DeSabla Reservoir and intermittent surges caused by the operation of the Leland Dam. The maximum, minimum and fluctuation of the daily discharge of Butte Creek at the Covered Bridge from June 21 to September 30, 1939, is hereinafter tabulated in Table 27.

It may be noted from Table 27 that the average fluctuation in the flow of Butte Creek was 69 cubic feet per second during the last 10 days in June, 54 cubic feet per second in July, 58 cubic feet per second in August, and 81 cubic feet per second in September. When there was no regulation in the DeSabla Reservoir and the Leland Dam was being held steady, the natural daily fluctuation varied from 4 to 8 cubic feet per second in accordance with climatic conditions. The average natural fluctuation was about 6 cubic feet per second.

The manner of operation of the Leland Dam caused heavy fluctuation in the flow of Butte Creek during the period of the investigation on 4 days in June, 7 days in July, 5 days in August and 6 days in September, 1939. An analysis of the fluctuations during these changes in the Leland Dam follows:

Date 1939	Fluctuations - Cubic feet per second			
	Natural	Leland Dam	Power Regulation	Total
June 22	5	45	42	92
June 23	4	35	31	70
June 24	6	110	48	164
June 28	6	41	45	92
July 3	7	174	51	232
July 7	6	37	49	92
July 10	7	107	55	169
July 13	5	43	4	52
July 14	8	155	4	167
July 15	7	139	0	146
July 18	6	41	6	53
August 4	6	40	52	98
August 7	6	33	52	91
August 18	7	40	52	99
August 19	6	38	56	100
August 28	6	31	58	95
September 2	5	36	51	92
September 16	5	154	28	187
September 19	7	33	57	97
September 22	5	191	64	260
September 26	4	41	61	106
September 27	4	172	62	238

The operation of the Leland Dam on the days set forth in the above tabulation caused fluctuations in both the natural flow of Butte Creek and the foreign water conveyed into the stream system from the West Branch of Feather River. There was no fluctuation in the natural flow of Butte Creek caused by the operation of the DeSabla Reservoir during the period of the investigation. The regulation in the DeSabla Reservoir was confined entirely to the foreign water.

The fluctuations caused by the Leland Dam were due to sluicing of the diversion tunnel leading therefrom which was in the process of construction. The Electric Mining Company contemplates no fluctuation in flow at the Leland Dam after commencement of operation of the proposed electric plant below the dam.

APPLICATIONS PENDING BEFORE THE DIVISION OF WATER RESOURCES

A summary of the pending applications to appropriate from Butte Creek and its tributaries that have been filed under the provisions of the Water Commission Act is hereinafter set forth in Table 26. Descriptions of the projects proposed under the applications and of the construction work and use of water, if any, thereunder follows:

Application 92

This application was filed by the Paradise Irrigation District on July 31, 1915, requesting a permit to appropriate 4148 acre-feet per annum of the water of Little Butte Creek and its tributaries to be stored in the proposed Princess Reservoir. The water is to be collected between November 1 and May 1 of each season.

Construction of an earth filled dam approximately 110 feet high, length on top 775 feet, and length on bottom 560 feet, is planned.

The water stored in Princess Reservoir will flow down the natural channel of Little Butte Creek and be rediverted therefrom at Magalia Dam, thence through a canal 13,120 feet long to the pipe distribution system of the Paradise Irrigation District.

On November 18, 1925 Permit 2326 was issued, allowing the appropriation of 4148 acre-feet storage for the irrigation of 11,000 acres. No construction work has been done under this application and permit, and consequently no diversion number is shown for the proposed project on the Division of Water Resources Map.

Application 476

This application was filed by the Paradise Irrigation District on

September 21, 1916, requesting a permit to appropriate 9500 acre-feet per annum of the waters of Little Butte Creek and its tributaries, for storage in the Magalia Reservoir. Permit 271 issued on May 3, 1917, granted the appropriation as sought under the application.

The proposed dam, when completed, is to be 134 feet high, 1250 feet long on the top and 710 feet long on the bottom. The Magalia Dam is indicated as Diversion 22 on the Division of Water Resources Map. The dam has been constructed to a present height of 90 feet and with a length on top of 860 feet. The maximum constructed capacity is 3400 acre-feet.

The water stored in the Magalia Reservoir is released through a wood stave pipe approximately 200 feet long controlled by gate valves. The pipe is equipped with a venturi meter for measuring the flow of water. The pipe is followed by an earth canal about 13,120 feet in length. The canal has a capacity of about 18.0 cubic feet per second. A pumping plant has been installed at the terminus of the canal to elevate the water into a regulating reservoir from which water is released into the pipe distribution system of the Paradise Irrigation District.

The ultimate irrigable area under Application 476 is to be 11,000 acres. 3229.4 acres of garden and orchard have been irrigated to date under this project.

Application 1656

This application was filed by James H. Jones on February 5, 1920, seeking an appropriation from Hamlin Slough of 12.0 cubic feet per second from May 1 to October 1 of each year. Permit 794 was issued on December 22, 1920.

The point of diversion is indicated as Diversion 64 on the Division of Water Resources Map. A rock and timber dam has been constructed 5 feet

high and 40 feet in length. A 14-inch centrifugal pump is used to lift the water to the high ground.

On November 27, 1928, License 880 was issued confirming the appropriation of 12.0 cubic feet per second for the irrigation of 2768 acres.

This application has been assigned to E. L. Adams, Herbert W. Whitten and the Federal Land Bank of Berkeley.

Application 2576

This application was filed by James H. Jones on October 6, 1921, requesting a permit to appropriate from Butte Creek 6.00 cubic feet per second from April 15 to September 15 of each year. Permit 1722 was issued on May 14, 1924.

The point of diversion has been changed to the NE¼ NW¼ of projected Section 5, T. 20 N., R. 2 E., M.D.B.& M. Water is now diverted through a gravity canal which has a capacity of about 50 cubic feet per second. The point of diversion is shown as Diversion 60 on the Division of Water Resources Map.

On March 24, 1931, License 1027 was issued confirming the appropriation of 6.00 cubic feet per second for the irrigation of 1616.9 acres.

This application has been assigned to E. L. Adams and the Federal Land Bank of Berkeley.

Application 2777

This application was filed by R. C. Gorrill, J. F. Van Lobensels and J. M. Hotchkiss, known as the G. H. V. Land Company, on March 6, 1922, seeking an appropriation of 15.0 cubic feet per second from Butte Creek from July 1 to September 30, and from Hamlin Slough from April 15 to June 30 of each year. Permit 1779 granting the appropriation sought was issued on

July 31, 1924.

The point of diversion on Butte Creek is indicated as Diversion 61 on the Division of Water Resources Map. The diversion dam on Butte Creek consists of 19 timber gate openings each 5 feet wide over a concrete base. The dam has concrete abutments and wing walls, Diversion is made on the east side of Butte Creek through a canal approximately 10 feet on top, 5 feet on the bottom and 3½ feet deep. It has an estimated capacity of 40.0 cubic feet per second. It conveys water 2300 feet into Hamlin Slough, where it is rediverted.

The point of diversion from Hamlin Slough is indicated as Diversion 66 on the Division of Water Resources Map, The diversion dam consists of eight 4-foot openings provided by timber gates constructed on a concrete base and with concrete abutments and wings. The Butte Creek water conveyed from Diversion 61 as above described is rediverted at Diversion 66 together with any water available in Hamlin Slough. The canal continues southerly from Diversion 66 for 13,200 feet along the west side if the state highway. Additional water is pumped into the canal from wells whenever required to supplement the flows available in Butte Creek and Hamlin Slough.

The appropriation of 15.0 cubic feet per second from Butte Creek and Hamlin Slough has been utilized for the irrigation of 2629 acres, of which approximately 700 to 900 acres are irrigated during any one season.

R. C. Gorrill has succeeded to the entire right covered by this application and permit.

Application 2805

This application was filed by E. L. Adams and Herbert W. Whitten, on March 24, 1922, requesting a permit to appropriate from Butte Creek 14.0

cubic feet per second from May 1 to September 15 of each year. Permit 1872 was issued October 29, 1924, granting the appropriation.

The point of diversion has been changed to the NE¼ NW¼ of projected Section 5, T. 20 N., R. 2 E., M.D.B.& M. Diversion is now made by gravity through a canal with an estimated capacity of 50 cubic feet per second. The point of diversion is shown as Diversion 60 on the Division of Water Resources Map. The canal is 17 feet in width on top, 7½ feet on the bottom, and water depth of 2' 10" for a distance of 4500 feet. It terminates in the NE¼ NE¼ of projected Section 8, T. 20 N., R. 2 E., M.D.B.& M.

March 25, 1931, license 1028 was issued confirming the appropriation of 14.0 cubic feet per second for the irrigation of 1214.9 acres.

Application 2909

This application was filed by Herbert W. Whitten on June 27, 1922, requesting a permit to appropriate 20.0 cubic feet per second from April 1 to June 15 of each season from Butte Creek, Roberts Slough, and Hamlin Slough. Permit 2027 was issued on March 13, 1925, granting the appropriation.

The diversion from Butte Creek is at the Colony Upper Dam hereinafter described in Appendix I under Diversion 56. The branch of the Colony Upper Ditch, known as the Adams and Whitten Canal, is 7 feet wide on top at the water line, 5 feet on the bottom, and it has a depth of water of 2 feet. The canal is earth and rock, being 2000 feet in length with a grade of 1 foot per 1000 feet. The water is spilled into Roberts Slough within the NE¼ NW¼ of Section 21, T. 21 N., R. 2 E., M.D.B.& M., being in Lot 82 of the Durham Colony Subdivision. Rediversion is made from Roberts Slough into Hamlin Slough within the NE¼ NE¼ of Section 4, T. 20 N., R. 2 E., M.D.B.& M. The main canal and natural channels are approximately 5.5 miles in length, terminating at a point of distribution in the NW¼ NE¼ of Section 4, T. 20 N., R. 2 E.,

M.D.B.& M.

License 1029 was issued on March 25, 1931 confirming the appropriation of 20.0 cubic feet per second for the irrigation of 1531.25 acres of rice and pasture.

Partial assignment of Application 2909 has been made to the Federal Land Bank of Berkeley and E. L. Adams.

Application 3191

This application was filed by Charles Belden on December 22, 1922, requesting a permit to appropriate from Karl Gulch tributary to Little Butte Creek 1.50 cubic feet per second from November 1 to July 1 of each season for mining purposes. Permit 1369 was issued on April 7, 1923 granting the appropriation.

The point of diversion is designated as Diversion 29 on the Division of Water Resources Map. A natural waterfall in Karl Gulch about 10 feet high is located at the head of the conduit. The diversion flume diverts under the waterfall without a diversion dam. The ditch terminates in the $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 2, T. 22 N., R. 3 E., M.D.B.& M. The diversion conduit, known as the Belden Ditch, consists of 1400 feet of earth and rock ditch and 1000 feet of flume. The average cross-section of the ditch is 14 inches at the water surface, 10 inches wide at the bottom and 5 inches deep. The grade is 7/8 inch in 16 feet and the total length of the conduit is approximately 2400 feet. The wooden flume is 12 inches wide and 6 inches deep with the same grade as the ditch. The computed capacity is approximately 1.5 cubic feet per second.

License 684 was issued on March 30, 1928, confirming the appropriation of 1.5 cubic feet per second.

Application 3250

This application was filed by Almon E. Smith on February 3, 1923, requesting a permit to appropriate from Middle Butte Creek 2.00 cubic feet per second from January 1 to December 31 of each year for mining purposes.

The point of diversion is indicated on the Division of Water Resources Map as Diversion 26. The dam is 4 feet high, 16 feet in length, and is constructed of poles, brush and rock. The ditch is a rehabilitated mining ditch approximately 3400 feet in length, 3 feet on the top, 1 foot on the bottom, and a depth of 2 feet. It has an average grade of one-half inch to the rod.

The computed maximum capacity is 2.50 cubic feet per second. The place of use is in Section 3, T. 22 N., R. 3 E., M.D.B.& M.

On May 29, 1923, Permit 1437 was granted and on June 8, 1927, License 606 was issued confirming the appropriation of 2.00 cubic feet per second.

Application 4663

This application was filed by E. L. Adams on June 30, 1925, requesting a permit to appropriate from Hamlin Slough 22.5 cubic feet per second from April 1 to September 15 of each season for irrigation purposes. Permit 2447 was issued on March 19, 1926 granting the appropriation.

On September 21, 1939, a change in point of diversion was approved to the $NE\frac{1}{4}$ $NE\frac{1}{4}$ of projected Section 4, T. 20 N., R. 2 E., M.D.B.& M., shown on the Division of Water Resources Map as Diversion 64. A dam approximately 6 feet high and 60 feet in length diverts the water into the distribution ditches.

License 1030 was issued on March 25, 1931 confirming the appropriation under Application 4663 to the extent of 13.8 cubic feet per second

for the irrigation of 1214.9 acres. The total combined use of water under the five applications of E. L. Adams, Herbert W. Whitten, and the Federal Land Bank of Berkeley has been 2116 acres of rice with a duty of one cubic foot per second to 40 acres, and 1032.2 acres of general crops with a duty of one cubic foot per second to 80 acres, making a combined water requirement of 65.8 cubic feet per second for which licenses have been issued.

Partial assignment of Application 4663 has been made to Herbert W. Whitten.

Application 4664

This application was filed by R. C. Gorrill and J. M. Hotchkiss on June 30, 1925, requesting a permit to appropriate from Hamlin Slough, 22.5 cubic feet per second from April 1 to September 15 of each season. The appropriation was allowed by issuance of Permit 2448 on March 19, 1926.

The point of diversion is indicated as Diversion 66 on the Division of Water Resources Map. The dam consists of eight 4-foot openings provided by timber gates constructed on a concrete base. The abutments and wings are also constructed of concrete. The water is diverted by means of the main canal described under Application 2777.

The total area included under the project embraces 2629.0 acres of which approximately 800 acres have been irrigated in one season.

On February 1, 1937, J. M. Hotchkiss assigned his interest in this application to R. C. Gorrill.

Application 4665

This application was filed by R. C. Gorrill and J. M. Hotchkiss on June 30, 1925, requesting a permit to appropriate from Butte Creek 15.0 cubic feet per second from April 1 to September 30, of each year. Permit 2449 was

issued on March 19, 1926 granting the appropriation.

The point of diversion is indicated as Diversion 61 on the Division of Water Resources Map. The diversion dam on Butte Creek has hereinbefore been described under Application 2777. The diversion conduit is also the same as that used under Application 2777. It has an estimated capacity of 40.0 cubic feet per second.

The same area of 2629 acres included under Applications 2777 and 4664 is included under Application 4665.

Application 4989

This application was filed by Margaret A. Strangham Smith, on April 7, 1926, requesting a permit to appropriate from the West Branch of Butte Creek, 3.0 cubic feet per second from January 1 to December 31 of each year for hydro-mechanical power and domestic purposes. Permit 2706 was issued on June 26, 1927 granting the appropriation.

The point of diversion is indicated as Diversion 46 on the Division of Water Resources Map. No dam is required to divert the water into a 1-foot square wooden culvert 4 feet long which has been laid parallel to the channel. The diverted water discharges from the culvert into 100 feet of 1-foot square wooden flume, which in turn discharges into an earth ditch 12,000 feet long. The ditch cross-section is 38 inches top width, 34 inches bottom width and 12 inches deep. The grade varies from 1/4 inch to the rod to 1.5 feet per 100 feet. The remainder of the diversion conduit consists of 3000 feet of earth ditch constructed on a grade of 1/4 inch to the rod. Its dimensions are $1\frac{1}{2}$ feet bottom width, $2\frac{1}{4}$ feet top width and 1 foot deep. The calculated capacity of the conduit is 2.53 cubic feet per second.

The ditch conveys the water into a forebay. The forebay is a wooden box 4 feet by 6 feet by 7 feet. The penstock is a 12-inch pipe 336

feet long, with the upper 30 feet being a taper section reducing from 24-inch entrance at the forebay to 12 inches. A gate valve and nozzle are connected at the lower end of the penstock. The total power drop is 122 feet. The calculated theoretical power at the nozzle is 48 horsepower.

A 72-inch Pelton water wheel is directly connected to an air compressor, which supplies air to the mine shafts.

On April 11, 1929, License 837 was issued confirming the appropriation of 2.53 cubic feet per second for power and domestic purposes.

Application 5109

This application was filed by James D. Phelan and Mary Louise Phelan, on July 17, 1926, requesting a permit to appropriate 20.0 cubic feet per second from January 1 to December 31, as made available in Butte Creek by the release of water collected in the Philbrook Reservoir by the Pacific Gas and Electric Company.

Permit 3210 was issued on February 11, 1929, allowing the appropriation of 20.0 cubic feet per second. On July 3, 1935, the above application was assigned to M. & T. Incorporated.

The point of rediversion from Butte Creek is the intake of the Parrott Ditch designated on the Division of Water Resources Map as Diversion 50. The concrete base diversion dam, known as the Parrott Dam, consists of a steel A frame drop-type dam, with sixteen 8-foot sections equipped with flashboards 7 feet long. The headgate is concrete with two wooden slide gates 3 feet wide and 4 feet high, operated by screw valves.

The cross-section of the ditch above the fish wheel is approximately 9 feet on top, 8 feet on the bottom, and depth of 4 feet. The grade is 2 feet per 1000 feet. The culverts near the head of the ditch limit the capacity to

about 120 cubic feet per second. The length of the ditch is 4630 feet to where it empties into the natural channel of Edgar Slough. The water is rediverted from Edgar Slough for the proposed irrigation of 3620 acres of the lands of M. & T., Incorporated. 1997.5 acres have been irrigated under the project to date.

The total length of conduit including ditch and natural channel from Diversion 50 to the place of use is approximately 9 miles, the terminus being located in the SW¼ of Section 18, T. 21 N., R. 1 E., M.D.B.& M., of the Rancho de Farwell.

Application 5110

This application was filed by the Parrott Investment Company, on July 17, 1926, requesting a permit to appropriate 20.0 cubic feet per second from January 1 to December 31, as made available in Butte Creek by the release of water collected in the Philbrook Reservoir by the Pacific Gas and Electric Company.

Permit 3211, was issued on February 11, 1929, allowing the appropriation of 20.0 cubic feet per second.

The point of rediversion, dam and headworks are identical with those hereinbefore described under Application 5109 of M. & T., Incorporated.

The water is rediverted from Edgar Slough for the proposed irrigation of 17,427.0 acres of the lands of Parrott Investment Company, of which 6159.2 acres have been irrigated under the project to date.

The total length of the conduit including ditch and natural channel from Diversion 50 to the place of use is approximately 11½ miles. The terminus of the conduit is located in the NW¼ of projected Section 31, T. 21 N., R. 1 E., M.D.B.& M., in the Llano Seco Rancho.

Application 8006

This application was filed by Jack L. Post, on July 3, 1934, requesting a permit to appropriate from Little Butte Creek, 13.0 cubic feet per second from January 1 to December 31 of each year.

Permit 4662 was issued on November 16, 1935, allowing the appropriation of 13.0 cubic feet per second for mining and domestic purposes.

The point of diversion is indicated as Diversion 28 on the Division of Water Resources Map. Water is diverted from the creek by a plank dam 30 feet long and 4 feet high, made watertight with canvas and sacks of dirt. Diversion is made through a 14-foot tunnel, thence into an earth ditch which has a cross-section of 5 feet on top, 3 feet on the bottom and $1\frac{1}{2}$ feet in depth. The grade is $7\frac{1}{2}$ feet per 1000 feet. The computed capacity is approximately 21.0 cubic feet per second. An inverted siphon of riveted steel which forms 225 feet of the conduit has a computed capacity of 12.4 cubic feet per second. The siphon conveys water from the ditch into a box forebay located at the head of 3200 feet of riveted steel pipe ranging in size from 30 inches to 8 inches. The ditch, flume and pipe lines have a combined length of approximately 6600 feet to the place of use, within the $SW\frac{1}{4}$ $SE\frac{1}{4}$ Section 3, T. 22 N., R. 3 E., M.D.B.& M. The conduit is known as the La Monte Ditch. The capacity of the conduit is limited by the pipe line to 2.14 cubic feet per second.

The mine where the water is used is known as the Mineral Slide Mine. Water has been available for the project from November to July. Little or no water has been available during the latter part of the summer.

Application 8187

This application was filed by the Parrott Investment Company on

December 1, 1934, requesting a permit to appropriate 100.0 cubic feet per second from January 1 to December 31, as made available in Butte Creek by the release of water collected in the Philbrook Reservoir by the Pacific Gas and Electric Company.

Permit 4699 was issued on February 18, 1936, limiting the total amount diverted under this approved application, together with that under Applications 5109, 5110 and 8188, to 100.0 cubic feet per second and 5060 acre-feet per annum.

The point of rediversion, dam, headworks are identical with these hereinbefore described under Application 5109. The conduit is the same as that hereinbefore described under Application 5110.

The water is rediverted from Edgar Slough for the proposed irrigation of 17,427.0 acres of the lands of Parrott Investment Company, of which 6159.2 acres have been irrigated under the project to date. This is the same area included under Application 5110.

Application 8188

This application was filed by the Alice Phelan Sullivan Corporation on December 1, 1934, requesting a permit to appropriate 100.0 cubic feet per second from January 1 to December 31, as made available in Butte Creek by the release of water collected in the Philbrook Reservoir by the Pacific Gas and Electric Company.

Permit 4700, was issued on February 18, 1936, limiting the total amount diverted under this approved application, together with that under Applications 5109, 5110, and 8187, to 100.0 cubic feet per second and 5060 acre-feet per annum. On July 3, 1935 the above application was assigned to M. & T., Incorporated.

The point of rediversion, dam, and headworks and diversion conduit are identical with those hereinbefore described under Application 5109. The area included under the application of 3620 acres is the same as that under Application 5109. 1997.5 acres have been irrigated under the project to date.

Application 8559

This application was filed by the Parrott Investment Company on February 19, 1936, requesting a permit to appropriate from Butte Creek 50.0 cubic feet per second from April 1 to June 1, of each season.

Permit 4743, was issued on June 11, 1936, allowing the appropriation of 50.0 cubic feet per second.

The point of diversion from Butte Creek is the intake of the Parrott Ditch designated on the Division of Water Resources Map as Diversion 50. The dam and headworks are identical with those hereinbefore described under Application 5109. The diversion conduit is the same as that hereinbefore described under Application 5110.

The water is rediverted from Edgar Slough for the proposed irrigation of the same area of 17,427.0 acres included under Applications 5110 and 8187. The maximum capacity of the conduit is about 120 cubic feet per second. The successors to the John Crouch Land Company divert 19-1/3 cubic feet per second through the conduit and George E. McLain uses about 0.10 cubic foot per second therefrom. The remaining capacity of the conduit is divided equally between Parrott Investment Company and M. & T., Incorporated.

Application 8565

This application was filed by the M. & T., Incorporated on February 27, 1936, requesting a permit to appropriate from Butte Creek 50.0 cubic feet per second from April 1 to June 1, of each season.

Permit 4744, was issued on June 11, 1936, allowing the appropriation of 50.0 cubic feet per second.

The point of diversion from Butte Creek is the intake of the Parrott Ditch designated on the Division of Water Resources Map as Diversion 50. The dam, headworks and diversion conduit are identical with those hereinbefore described under application 5109.

The water is rediverted from Edgar Slough for the proposed irrigation of the same area of 3620.0 acres included under Applications 5109 and 8188. This area is embraced within the Rancho de Farwell.

The maximum capacity of the conduit is about 120 cubic feet per second. The successors to the John Crouch Land Company divert 19-1/3 cubic feet per second through the conduit and George E. McLain uses about 0.10 cubic foot per second therefrom. The remaining capacity of the conduit is divided equally between M. & T., Incorporated and Parrott Investment Company.

Application 8646

This application was filed by James H. Ripley on April 25, 1936, requesting a permit to appropriate from an unnamed spring, tributary to Little Butte Creek, 0.20 cubic foot per second from January 1 to December 31 of each year, for power purposes.

Permit 4788, was issued on August 7, 1936, allowing the appropriation of 0.20 cubic foot per second. On November 11, 1939 the above application was assigned to Paul Ripley.

The point of diversion is indicated as Diversion 27 on the Division of Water Resources Map. The diversion dam is 1 foot high and 12 feet long, and is constructed of earth and rock. The ditch has a cross-section of approximately 2 feet on top, 1 foot on the bottom, and 1/2 foot in depth. It is about 660 feet in length and has a grade of 10 feet per 1000 feet. The

estimated maximum capacity of the ditch is 1.95 cubic feet per second. The developed horsepower of 1.14 is to be used for power purposes within the SE¼ SE¼ of Section 2, T. 22 N., R. 3 E., M.D.B.& M.

Application 8724

This application was filed by John L. Olson, on July 2, 1936, requesting a permit to appropriate from an unknown stream, tributary of Butte Creek, 2.5 cubic feet per second from January 1 to December 31 of each year.

Permit 4848, was issued on December 1, 1936, allowing the appropriation of 2.5 cubic feet per second for mining and domestic purposes.

The point of diversion is designated on the Division of Water Resources Map as Diversion 11. A flume diverts the water at the head of ditch without the necessity of a diversion dam. The ditch is 3 feet wide on top, 1½ feet on the bottom, and 1 foot in depth. The grade is approximately 20 feet per 1000 feet. The calculated capacity is 10.0 cubic feet per second.

The water is returned to Butte Creek at the place of use within the SW¼ SE¼ of Section 23, T. 24 N., R. 3 E., M.D.B.& M.

Water has been used each month for mining and domestic purposes at the O.K. Placer Claim.

Application 9316

This application was filed by the Delta Bench Placer Mines on June 10, 1938, requesting a permit to appropriate from Butte Creek, 1.8 cubic feet per second from January 1 to December 31 of each year.

An assignment was made on February 28, 1939 to S. C. Sorensen.

Permit 5284, was issued on January 4, 1939, allowing the appropriation of 1.8 cubic feet per second for mining purposes.

The point of diversion is designated on the Division of Water

Resources Map as Diversion 48. The water will be diverted by means of a pump into a 6-inch steel pipe 800 feet in length. The total head on the pump from its intake to outlet of the pipe is 235 feet.

The place of use is within the SW¼ SW¼ of Section 28, T. 23 N., R. 3 E., M.D.B.& M.

Application 9504

This application was filed by the Durham Mutual Water Company, Ltd., on February 10, 1939, requesting a permit to appropriate from Butte Creek, 20.0 cubic feet per second from April 15 to November 15 of each season, for the irrigation of 1364.0 acres.

The point of diversion from Butte Creek is known as the Colony Lower Dam, designated on the Division of Water Resources Map as Diversion 59. The concrete base diversion dam is 5 feet in height, 80 feet in length and is equipped with steel uprights and wooden flashboards. The ditch diverting from the dam is 10 feet in width on the top, 4 feet in width on the bottom and the depth of water is 4 feet. The ditch is 15,000 feet in length and has a grade of 1 foot per 1000 feet. The estimated capacity of the ditch is 30.0 cubic feet per second.

The ditch terminates in the NE¼ SW¼ of Section 5, T. 20 N., R 2 E., M.D.B.& M.

This application is to supplement the decreed rights of the Durham Mutual Water Company, Ltd., hereinafter set forth in Appendix II.

Application 9735

This application was filed by the M. & T., Incorporated on September 22, 1939, requesting a permit to appropriate from Butte Creek 50.0 cubic feet per second from June 1 to October 15, of each season.

The point of diversion from Butte Creek is the intake of the Parrott Ditch designated on the Division of Water Resources Map as Diversion 50. The dam and headworks are identical with those hereinbefore described under Application 5109. The conduit is the same as that hereinbefore described under Application 5110.

The above application is to supplement Application 8565 by extending the season of use for the same amount of water on the same acreage beyond June 1 as long as water is available therefor up to October 15.

Consideration of the protests of Durham Mutual Water Company, Ltd., E. L. Adams and Herbert W. Whitten, and Bee P. Compton has been deferred pending the report of the Division of Water Resources relative to the Butte Creek Adjudication.

Application 9736

This application was filed by the Parrott Investment Company on September 22, 1939, requesting a permit to appropriate from Butte Creek 50.0 cubic feet per second from June 1 to October 15 of each season.

The point of diversion from Butte Creek is the intake of the Parrott Ditch designated on the Division of Water Resources Map as Diversion 50. The dam, headworks and diversion conduit are identical with those hereinbefore described under Application 5109.

The above application is to supplement Application 8559 by extending the season of use for the same amount of water on the same acreage beyond June 1 as long as water is available therefor up to October 15.

Consideration of the protests of Durham Mutual Water Company, Ltd., E. L. Adams and Herbert W. Whitten and Bee P. Compton has been deferred pending the report of the Division of Water Resources relative to the Butte Creek Adjudication.

TABLE 1

DESCRIPTION OF AREAS IRRIGATED FROM
BUTTE CREEK AND ITS TRIBUTARIES

E. L. Adams and Lou R. Adams (Map Sheet 3)

41.7 acres in SW¼ of Section 9, T. 20 N., R. 2 E., M.D.B.& M.
340.9 acres in that portion of Section 16, T. 20 N., R. 2 E., M.D.B.& M., lying SW of Northern Electric Railroad.
8.5 acres in NW¼ NW¼ of Section 21, T. 20 N., R. 2 E., M.D.B.& M.
63.8 acres in that portion of N½ of Section 20, T. 20 N., R. 2 E., M.D.B.& M., lying East of Southern Pacific Railroad.
478.2 acres in that portion of Section 17, T. 20 N., R. 2 E., M.D.B.& M., lying East of Southern Pacific Railroad.
200.0 acres in that portion of Section 8, T. 20 N., R. 2 E., M.D.B.& M., lying SE of Hamlin Slough.
18.8 acres in NE¼ NE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
95.0 acres in NW¼ of Section 34, T. 21 N., R. 2 E., M.D.B.& M.
60.8 acres in Lot 29 of Durham State Land Settlement.
109.8 acres in Lot 30 of Durham State Land Settlement.
80.0 acres in Lot 31 of Durham State Land Settlement.
80.0 acres in Lot 33A of Durham State Land Settlement.
80.0 acres in Lot 34A of Durham State Land Settlement.
197.3 acres in Lot 41 of Durham State Land Settlement.
92.9 acres in Lot 15A of Durham State Land Settlement.
105.6 acres in Lot 36A of Durham State Land Settlement.
120.8 acres in Lot 14A of Durham State Land Settlement.
104.2 acres in Lot 37A of Durham State Land Settlement.
107.1 acres in Lot 18A of Durham State Land Settlement.
92.8 acres in Lot 19A of Durham State Land Settlement.
55.0 acres in southerly portion of Lot 35A of Durham State Land Settlement.
2533.2 acres - Total (All in Rancho Esquon) Tract #1.
Section lines have been projected.

E. L. Adams and Lou R. Adams (Map Sheet 3)

8.5 acres in NE¼ SW¼ of Section 5, T. 20 N., R. 2 E., M.D.B.& M.
8.0 acres in SW¼ SW¼ of Section 5, T. 20 N., R. 2 E., M.D.B.& M.
38.0 acres in SE¼ SW¼ of Section 5, T. 20 N., R. 2 E., M.D.B.& M.
5.0 acres in SW¼ SE¼ of Section 5, T. 20 N., R. 2 E., M.D.B.& M.
8.0 acres in SE¼ NE¼ of Section 7, T. 20 N., R. 2 E., M.D.B.& M.
30.0 acres in NW¼ NW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
40.0 acres in NE¼ NW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
80.0 acres in S½ NW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
30.0 acres in NW¼ NE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
23.0 acres in SW¼ NE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
3.0 acres in NW¼ SE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
33.0 acres in NE¼ SW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.

E. L. Adams and Lou R. Adams (Map Sheet 3)

5.0 acres in SE¼ SW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
34.0 acres in NW¼ SW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
23.0 acres in SW¼ SW¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
320.7 acres in that portion of Section 4, T. 20 N., R. 2 E., M.D.B.& M., lying SE of Hamlin Slough.
3.0 acres in NE¼ NE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
187.0 acres in W½ of Section 3, T. 20 N., R. 2 E., M.D.B.& M.
135.0 acres in SW¼ of Section 34, T. 21 N., R. 2 E., M.D.B.& M.
5.0 acres in SE¼ SE¼ of Section 33, T. 21 N., R. 2 E., M.D.B.& M.
133.0 acres in N½ N½ of Section 9, T. 20 N., R. 2 E., M.D.B.& M.
39.0 acres in N½ NW¼ of Section 20, T. 20 N., R. 2 E., M.D.B.& M.
1191.2 acres - Total (All in Rancho Esquon) Tract #2.
Section lines have been projected.

Anne Kennedy Anderson, Donald Mathewson and Winifred M. Kennedy (Map Sheet 6)

8.0 acres in N½ N½ NE¼ SW¼ of Section 12, T. 26 N., R. 4 E., M.D.B.& M.
8.0 acres - Total

Samuel A. Atkins and Barbara Ina Atkins (Map Sheet 3)

13.0 acres in SE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
10.0 acres in SW¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
1.0 acre in NE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
10.0 acres in NW¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
30.0 acres in Lot 12 of Ackerman Tract in Section 17, T. 21 N., R. 2 E., M.D.B.& M.
64.0 acres - Total

C. M. Archer (Map Sheet 4)

11.9 acres in NW¼ NE¼ of Section 34, T. 23 N., R. 3 E., M.D.B.& M.
11.9 acres - Total

C. W. Baxter, Ralph J. Baxter, F. T. Woell and Mary B. Woell (Map Sheet 3)

5.1 acres in SE¼ NE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
7.2 acres in NE¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
12.3 acres - Total (Colony Upper Ditch)

Chas. Belden (Map Sheet 4)

Mining use in SE¼ SW¼ Section 2, T. 22 N., R. 3 E., M.D.B.& M.

L. C. Bonham (Map Sheet 4)

8.3 acres in NE¼ NW¼ of Section 34, T. 23 N., R. 3 E., M.D.B.& M.
8.3 acres - Total

George Brandt and Edna May Brandt (Map Sheet 3)

35.8 acres in Lot 63A of Durham State Land Settlement.
14.2 acres in Lot 63B of Durham State Land Settlement.
50.0 acres - Total

California Lands, Inc. (Map Sheet 2)

60.4 acres in Section 9, T. 21 N., R. 1 E., M.D.B.& M.
6.8 acres in Section 10, T. 21 N., R. 1 E., M.D.B.& M.
34.0 acres in Section 15, T. 21 N., R. 1 E., M.D.B.& M.
67.3 acres in Section 16, T. 21 N., R. 1 E., M.D.B.& M.
168.5 acres - Total (North Tract) (In Dayton Mutual Water Company, Ltd.)

13.5 acres in Section 15, T. 21 N., R. 1 E., M.D.B.& M.
236.0 acres in Section 16, T. 21 N., R. 1 E., M.D.B.& M.
206.5 acres in Section 17, T. 21 N., R. 1 E., M.D.B.& M.
25.8 acres in Section 20, T. 21 N., R. 1 E., M.D.B.& M.
481.8 acres - Total (South Tract) (In Dayton Mutual Water Company, Ltd.)
Section lines have been projected.

Edwin A. Carlson and Gladys Carlson (Map Sheet 3)

36.7 acres in Lots 8, 9, 11 and 12 of the Ackerman Tract in Section 17, T. 21 N., R. 2 E., M.D.B.& M.
36.7 acres - Total

Corporation of America (Map Sheet 3)

11.5 acres in SE¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
8.5 acres in SW¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
20.0 acres - Total (Durham Tract)

Ida B. Clark and Warren P. Clark (E. H. Statham) (Map Sheet 4)

6.0 acres in SW¼ NW¼ of Section 30, T. 22 N., R. 3 E., M.D.B.& M.
6.0 acres - Total

Richard A. Colgan, Jr. (Map Sheet 6)

1.0 acres in Lot 10 of Butte Meadows Subdivision No. 1.
1.0 acre - Total

Bee Compton (Map Sheet 3)

4.0 acres in NE¼ NW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
13.6 acres in SW¼ NW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
9.8 acres in NW¼ NW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
21.2 acres in NE¼ SW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
6.0 acres in SE¼ SW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
0.5 acre in SW¼ SW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
0.3 acre in NW¼ SW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
0.9 acre in SE¼ SE¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
29.8 acres in NE¼ NE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
38.7 acres in SE¼ NE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
3.4 acres in SW¼ NE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
12.8 acres in NW¼ NE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
15.5 acres in NE¼ SE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
29.8 acres in SE¼ SE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
23.8 acres in SW¼ SE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
2.1 acres in NW¼ SE¼ of Section 12, T. 21 N., R. 1 E., M.D.B.& M.
9.4 acres in NE¼ NE¼ of Section 13, T. 21 N., R. 1 E., M.D.B.& M.
6.8 acres in NW¼ NE¼ of Section 13, T. 21 N., R. 1 E., M.D.B.& M.
228.4 acres - Total

Edwin B. Copeland (Map Sheet 6)

4.0 acres in SE¼ NW¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.
4.0 acres - Total

Emma Crewe (Map Sheet 5)

3.0 acres in NE¼ SW¼ of Section 24, T. 24 N., R. 3 E., M.D.B.& M.
3.0 acres - Total

Lloyd E. DeBock and O. B. DeBock (Map Sheet 2)

41.7 acres in S½ NW¼ of Section 15, T. 21 N., R. 1 E., M.D.B.& M.
41.7 acres - Total (In Dayton Mutual Water Company, Ltd.,)
Section lines have been projected.

The Diamond Match Company (Map Sheet 4)

Domestic and industrial purposes in T. 24 N., R. 3 E.,; T. 24 N., R. 4 E.; T. 25 N., R. 3 E.; T. 25 N., R. 4 E.; and T. 26 N., R. 4 E.; all M.D.B.& M.

Lovie L. Downs (Map Sheet 4)

0.8 acre in NE¼ SE¼ of Section 1, T. 23 N., R. 3 E., M.D.B.& M.
0.8 acre - Total

Estate of Ernest Duensing, deceased (Map Sheet 5)

3.5 acres in SW¼ NW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M.
0.8 acre in SE¼ NW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M.
4.7 acres in NW¼ SW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M.
5.1 acres in N½ NE¼ SW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M.
*1.7 acres in S½ NE¼ SW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M.
15.8 acres - Total

*Denotes irrigated land outside of property line.

Stockholders in Durham Mutual Water Company, Ltd. (Map Sheet 3)

33.5 acres in Lot 1 of Durham State Land Settlement.
4.2 acres in Lot 2 of Durham State Land Settlement.
12.7 acres in Lot 2A of Durham State Land Settlement.
10.0 acres in Lot 2B of Durham State Land Settlement.
5.0 acres in Lot 2C of Durham State Land Settlement.
15.8 acres in Lot 2D of Durham State Land Settlement.
17.7 acres in Lot 3A of Durham State Land Settlement.
12.0 acres in Lot 3B of Durham State Land Settlement.
5.0 acres in Lot 3C of Durham State Land Settlement.
5.0 acres in Lot 3D of Durham State Land Settlement.
39.8 acres in Lot 4 of Durham State Land Settlement.
47.9 acres in Lot 5 of Durham State Land Settlement.
29.3 acres in Lot 6 of Durham State Land Settlement.
33.0 acres in Lot 7 of Durham State Land Settlement.
32.5 acres in Lot 8 of Durham State Land Settlement.
32.0 acres in Lot 9 of Durham State Land Settlement.
41.9 acres in Lot 10 of Durham State Land Settlement.
30.3 acres in Lot 11 of Durham State Land Settlement.
15.0 acres in Lot 12A of Durham State Land Settlement.
15.3 acres in Lot 12 of Durham State Land Settlement.
31.2 acres in Lot 13 of Durham State Land Settlement.
23.1 acres in Lot 14 of Durham State Land Settlement.
17.8 acres in Lot 15 of Durham State Land Settlement.
13.7 acres in Lot 16 of Durham State Land Settlement.
13.5 acres in Lot 16A of Durham State Land Settlement.
18.5 acres in Lot 18 of Durham State Land Settlement.
3.0 acres in Lot 19 of Durham State Land Settlement.
17.0 acres in Lot 19A of Durham State Land Settlement.
3.3 acres in Lot 20 of Durham State Land Settlement.
17.0 acres in Lot 20A of Durham State Land Settlement.
24.8 acres in Lot 21 of Durham State Land Settlement.
10.3 acres in Lot 22 of Durham State Land Settlement.
1.2 acres in Lot 22A of Durham State Land Settlement.
10.0 acres in Lot 22B of Durham State Land Settlement.
40.0 acres in Lot 23 of Durham State Land Settlement.
40.1 acres of Lot 24 of Durham State Land Settlement.
80.0 acres in Lot 25 of Durham State Land Settlement.
64.8 acres in Lot 26 of Durham State Land Settlement.
48.9 acres in Lot 27 of Durham State Land Settlement.
45.9 acres in Lot 27A of Durham State Land Settlement.

Stockholders in Durham Mutual Water Company, Ltd. (Cont'd.) (Map Sheet 3)

15.0 acres in Lot 27A of Durham State Land Settlement.
72.7 acres in Lot 28 of Durham State Land Settlement.
80.0 acres in Lot 32 of Durham State Land Settlement.
20.0 acres in Lot 33 of Durham State Land Settlement.
20.0 acres in Lot 34 of Durham State Land Settlement.
22.4 acres in Lot 35 of Durham State Land Settlement.
24.0 acres in Lot 36 of Durham State Land Settlement.
22.1 acres in Lot 37 of Durham State Land Settlement.
44.0 acres in Lot 38 of Durham State Land Settlement.
15.4 acres in Lot 39 of Durham State Land Settlement.
40.0 acres in Lot 39A of Durham State Land Settlement.
36.1 acres in Lot 40 of Durham State Land Settlement.
50.2 acres in Lot 40A of Durham State Land Settlement.
3.8 acres in Lot 43 of Durham State Land Settlement.
0.8 acre in Lot 43A of Durham State Land Settlement.
0.8 acre in Lot 43B of Durham State Land Settlement.
0.4 acre in Lot 43D of Durham State Land Settlement.
7.2 acres in Lot 44 of Durham State Land Settlement.
5.4 acres in Lot 44A of Durham State Land Settlement.
4.3 acres in Lot 44B of Durham State Land Settlement.
15.1 acres in Lot 44C of Durham State Land Settlement.
24.3 acres in Lot 45 of Durham State Land Settlement.
11.9 acres in Lot 46 of Durham State Land Settlement.
25.0 acres in Lot 46A of Durham State Land Settlement.
28.5 acres in Lot 47 of Durham State Land Settlement.
41.2 acres in Lot 48 of Durham State Land Settlement.
31.1 acres in Lot 49 of Durham State Land Settlement.
40.2 acres in Lot 50 of Durham State Land Settlement.
49.5 acres in Lot 51 of Durham State Land Settlement.
31.1 acres in Lot 52 of Durham State Land Settlement.
29.4 acres in Lot 53 of Durham State Land Settlement.
22.3 acres in Lot 54 of Durham State Land Settlement.
17.7 acres in Lot 55 of Durham State Land Settlement.
18.0 acres in Lot 56 of Durham State Land Settlement.
9.4 acres in Lot 57 of Durham State Land Settlement.
18.9 acres in Lot 58 of Durham State Land Settlement.
20.7 acres in Lot 59 of Durham State Land Settlement.
30.0 acres in Lot 59A of Durham State Land Settlement.
21.5 acres in Lot 60 of Durham State Land Settlement.
38.8 acres in Lot 60A of Durham State Land Settlement.
52.8 acres in Lot 61 of Durham State Land Settlement.
5.2 acres in Lot 62 of Durham State Land Settlement.
9.8 acres in Lot 63 of Durham State Land Settlement.
39.1 acres in Lot 64 of Durham State Land Settlement.
47.6 acres in Lot 65 of Durham State Land Settlement.
41.6 acres in Lot 66 of Durham State Land Settlement.
22.0 acres in Lot 67 of Durham State Land Settlement.
10.0 acres in Lot 67A of Durham State Land Settlement.
10.0 acres in Lot 67B of Durham State Land Settlement.
41.3 acres in Lot 68 of Durham State Land Settlement.
39.4 acres in Lot 69 of Durham State Land Settlement.
1.0 acre in Lot 82 of Durham State Land Settlement.

Stockholders in Durham Mutual Water Company, Ltd. (Cont'd.) (Map Sheet 3)

33.6 acres in Lot 70 of Durham State Land Settlement.
22.4 acres in Lot 71 of Durham State Land Settlement.
50.0 acres in projected Sections 20 and 21, T. 21 N., R. 2 E., M.D.B.& M.
31.2 acres in Lot 72 of Durham State Land Settlement.
31.0 acres in Lot 73 of Durham State Land Settlement.
20.0 acres in projected Sections 20 and 29, T. 21 N., R. 2 E., M.D.B.& M.
37.0 acres in Lot 74 of Durham State Land Settlement.
33.1 acres in Lot 75 of Durham State Land Settlement.
24.3 acres in Lot 76 of Durham State Land Settlement.
34.5 acres in Lot 77 of Durham State Land Settlement.
40.0 acres in Lot 78 of Durham State Land Settlement.
40.0 acres in Lot 79 of Durham State Land Settlement.
30.3 acres in Lot 80 of Durham State Land Settlement.
21.6 acres in Lot 80A of Durham State Land Settlement.
23.0 acres in Lot 80B of Durham State Land Settlement.
21.7 acres in Lot 81 of Durham State Land Settlement.
26.5 acres in Lot 81A of Durham State Land Settlement.
37.9 acres in Lot 82 of Durham State Land Settlement.
80.0 acres in Lot 83 of Durham State Land Settlement.
5.0 acres in Lot 31 of Durham State Land Settlement.
64.9 acres in Lot 84 of Durham State Land Settlement.
20.0 acres in Lot 84A of Durham State Land Settlement.
80.0 acres in Lot 85 of Durham State Land Settlement.
80.0 acres in Lot 86 of Durham State Land Settlement.
80.0 acres in Lot 87 of Durham State Land Settlement.
8.7 acres in Lot 88 of Durham State Land Settlement.
14.0 acres in projected Section 29, T. 21 N., R. 2 E., M.D.B.& M.
8.7 acres in Lot 89 of Durham State Land Settlement.
20.7 acres in Lot 90 of Durham State Land Settlement.
9.6 acres in Lot 92 of Durham State Land Settlement.
9.2 acres in Lot 93 of Durham State Land Settlement.
15.2 acres in Lot 94 of Durham State Land Settlement.
13.6 acres in Lot 95 of Durham State Land Settlement.
25.5 acres in Lot 97 of Durham State Land Settlement.
22.4 acres in Lot 98 of Durham State Land Settlement.
12.7 acres in Lot 99 of Durham State Land Settlement.
48.2 acres in Lot 100 of Durham State Land Settlement.
2.6 acres in Lot 103 of Durham State Land Settlement.
3.1 acres in Lot 104 of Durham State Land Settlement.
2.2 acres in Lot 105 of Durham State Land Settlement.
2.1 acres in Lot 106 of Durham State Land Settlement.
2.1 acres in Lot 107 of Durham State Land Settlement.
5.0 acres in Lot 108 of Durham State Land Settlement.
7.3 acres in Lot 109 of Durham State Land Settlement.
7.4 acres in Lot 110 of Durham State Land Settlement.
6.4 acres in Lot 111 of Durham State Land Settlement.
10.1 acres in Lot 112 of Durham State Land Settlement.
1.7 acres in Lot A of Durham State Land Settlement.
1.7 acres in Lot B of Durham State Land Settlement.
1.7 acres in Lot C of Durham State Land Settlement.
1.7 acres in Lot D of Durham State Land Settlement.

Stockholders in Durham Mutual Water Company, Ltd. (Cont'd.) (Map Sheet 3)

0.9	acre	in Lot E	of Durham State Land Settlement.
0.9	acre	in Lot E-1	of Durham State Land Settlement.
1.7	acres	in Lot F	of Durham State Land Settlement.
1.7	acres	in Lot G	of Durham State Land Settlement.
1.7	acres	in Lot H	of Durham State Land Settlement.
1.7	acres	in Lot I	of Durham State Land Settlement.
1.7	acres	in Lot J	of Durham State Land Settlement.
1.7	acres	in Lot K	of Durham State Land Settlement.
1.7	acres	in Lot L	of Durham State Land Settlement.
1.7	acres	in Lot M	of Durham State Land Settlement.
1.7	acres	in Lot N	of Durham State Land Settlement.
1.7	acres	in Lot O	of Durham State Land Settlement.
1.7	acres	in Lot P	of Durham State Land Settlement.
2.0	acres	in Lot Q	of Durham State Land Settlement.
2.0	acres	in Lot R	of Durham State Land Settlement.
2.0	acres	in Lot S	of Durham State Land Settlement.
2.0	acres	in Lot T	of Durham State Land Settlement.
2.0	acres	in Lot U	of Durham State Land Settlement.
1.7	acres	in Lot V	of Durham State Land Settlement.
1.7	acres	in projected Section 29, T. 21 N., R. 2 E., M.D.B.& M. (Lot "a"	
1.9	acres	in Lot W	of Durham State Land Settlement.
1.9	acres	in Lot X	of Durham State Land Settlement.
1.9	acres	in Lot Y	of Durham State Land Settlement.
1.9	acres	in Lot Z	of Durham State Land Settlement.
3564.1	acres	- Total (All in Rancho Esquon)	

Electric Mining Company (Map Sheet 4)

Hydroelectric power in $S\frac{1}{2}$ $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 8, T. 22 N., R. 3 E., M.D.B.& M.

Clarence S. Entler (Map Sheet 3

10.6	acres	in $NE\frac{1}{4}$ $SE\frac{1}{4}$	of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
6.0	acres	in $SE\frac{1}{4}$ $SE\frac{1}{4}$	of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
19.5	acres	in $SW\frac{1}{4}$ $SE\frac{1}{4}$	of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
3.4	acres	in $NW\frac{1}{4}$ $SE\frac{1}{4}$	of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
18.9	acres	in $SE\frac{1}{4}$ $SW\frac{1}{4}$	of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
3.6	acres	in $NW\frac{1}{4}$ $NE\frac{1}{4}$	of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
13.0	acres	in $NE\frac{1}{4}$ $NW\frac{1}{4}$	of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
75.0	acres	- Total	

Albert Estates (Map Sheet 3)

23.8 acres in Section 8, T. 21 N., R. 1 E., M.D.B.& M.
27.2 acres in Section 9, T. 21 N., R. 1 E., M.D.B.& M.
21.0 acres in Section 15, T. 21 N., R. 1 E., M.D.B.& M.
238.0 acres in Section 16, T. 21 N., R. 1 E., M.D.B.& M.
154.7 acres in Section 17, T. 21 N., R. 1 E., M.D.B.& M.
464.7 acres - Total (In Dayton Mutual Water Company, Ltd.)
Section lines have been projected.

Harold D. Estes (Map Sheet 2)

13.4 acres in Lot 10 of McIntosh Tract.
10.0 acres in Lot 13 of McIntosh Tract.
14.0 acres in Lot 14 of McIntosh Tract.
10.2 acres in Lot 15 of McIntosh Tract.
8.8 acres in Lot 16 of McIntosh Tract.
6.6 acres in Lot 19 of McIntosh Tract.
3.2 acres in Lot 12 of McIntosh Tract.
66.2 acres - Total (All in NE¼ of Section 2, T. 21 N., R. 1 E., M.D.B.& M.)

Ella G. Evers (Map Sheet 4)

13.6 acres in SW¼ SE¼ of Section 17, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres - Total

The Federal Land Bank of Berkeley (Map Sheet 3)

26.9 acres in NE¼ SW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
27.7 acres in SE¼ SW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in SW¼ SW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
28.5 acres in NE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
1.2 acres in SE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
24.6 acres in NW¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
7.6 acres in NE¼ NE¼ of Section 18, T. 21 N., R. 2 E., M.D.B.& M.
156.5 acres - Total

E. L. Franks (Map Sheet 6)

2.9 acres in SE¼ SW¼ of Section 21, T. 26 N., R. 5 E., M.D.B.& M.
20.4 acres in SW¼ SE¼ of Section 21, T. 26 N., R. 5 E., M.D.B.& M.
6.0 acres in SE¼ SE¼ of Section 21, T. 26 N., R. 5 E., M.D.B.& M.
19.6 acres in NW¼ NE¼ of Section 28, T. 26 N., R. 5 E., M.D.B.& M.
34.9 acres in NE¼ NE¼ of Section 28, T. 26 N., R. 5 E., M.D.B.& M.
11.9 acres in NW¼ NW¼ of Section 27, T. 26 N., R. 5 E., M.D.B.& M.
7.7 acres in SW¼ NW¼ of Section 27, T. 26 N., R. 5 E., M.D.B.& M.
103.4 acres - Total

Isabelle A. Goodspeed and Estate of Vera E. Upphoff, deceased.
(Map Sheets 3 and 4)

320.0 acres in $N\frac{1}{2}$ of Section 22, T. 20 N., R. 1 E., M.D.B.& M.
115.0 acres in $S\frac{1}{2}$ $S\frac{1}{2}$ of Section 14, T. 20 N., R. 1 E., M.D.B.& M.
83.7 acres in that portion of $S\frac{1}{2}$ $S\frac{1}{2}$ of Section 13, T. 20 N., R. 1 E., M.D.B.& M., lying West of Butte Creek.
320.0 acres in $N\frac{1}{2}$ of Section 23, T. 20 N., R. 1 E., M.D.B.& M.
233.6 acres in $N\frac{1}{2}$ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
1072.3 acres - Total (All in Rancho Aguas Frias)

Ryland C. Goodspeed and Marian L. Goodspeed aa (Map Sheet 3)

320.0 acres in $N\frac{1}{2}$ of Section 14, T. 20 N., R. 1 E., M.D.B.& M.
160.0 acres in $N\frac{1}{2}$ $S\frac{1}{2}$ of Section 14, T. 20 N., R. 1 E., M.D.B.& M.
45.0 acres in $S\frac{1}{2}$ $S\frac{1}{2}$ of Section 14, T. 20 N., R. 1 E., M.D.B.& M.
320.0 acres in $N\frac{1}{2}$ of Section 13, T. 20 N., R. 1 E., M.D.B.& M.
160.0 acres in $N\frac{1}{2}$ $S\frac{1}{2}$ of Section 13, T. 20 N., R. 1 E., M. D.B.& M.
30.0 acres in $S\frac{1}{2}$ $S\frac{1}{2}$ of Section 13, T. 20 N., R. 1 E., M.D.B.& M.
1035.0 acres - Total (All in Rancho Aguas Frias)

Ralph C. Gorrill (Map Sheet 3)

*57.8 acres in Section 7, T. 20 N., R. 2 E., M.D.B.& M.
*7.3 acres in Section 8, T. 20 N., R. 2 E., M.D.B.& M.
*427.0 acres in Section 18, T. 20 N., R. 2 E., M.D.B.& M.
*148.0 acres in Section 17, T. 20 N., R. 2 E., M.D.B.& M.
*515.0 acres in Section 19, T. 20 N., R. 2 E., M.D.B.& M.
*335.3 acres in Section 20, T. 20 N., R. 2 E., M.D.B.& M.
*442.7 acres in Section 29, T. 20 N., R. 2 E., M.D.B.& M.
*58.2 acres in Section 30, T. 20 N., R. 2 E., M.D.B.& M.
(*All in Rancho Esquon) Section lines have been projected.

20.2 acres in Lot 1 of Section 29, T. 20 N., R. 2 E., M.D.B.& M.
38.2 acres in Lot 5 of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
34.5 acres in Lot 6 of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
34.5 acres in Lot 7 of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
20.0 acres in Lot 8 of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
23.3 acres in Lot 9 of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
40.0 acres in $SW\frac{1}{4}$ $NE\frac{1}{4}$ of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
40.0 acres in $NW\frac{1}{4}$ $SE\frac{1}{4}$ of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
40.0 acres in $SW\frac{1}{4}$ $SE\frac{1}{4}$ of Section 30, T. 20 N., R. 2 E., M.D.B.& M.
2282.0 acres - Total

Frank Graham (Map Sheet 4)

Domestic use in $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 11, T. 23 N., R. 3 E., M.D.B.& M.

Donald Hale and Alice Hilby Hale (Map Sheet 3)

0.2 acre in SW¼ NE¼ of Section 4, T. 21 N., R. 2 E., M.D.B.& M.
0.4 acre in NE¼ NW¼ of Section 4, T. 21 N., R. 2 E., M.D.B.& M.
3.5 acres in SE¼ NW¼ of Section 4, T. 21 N., R. 2 E., M.D.B.& M.
10.3 acres in SW¼ NW¼ of Section 4, T. 21 N., R. 2 E., M.D.B.& M.
12.0 acres in NW¼ NW¼ of Section 4, T. 21 N., R. 2 E., M.D.B.& M.
24.1 acres in NE¼ NE¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
16.0 acres in SE¼ NE¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
10.4 acres in SW¼ NE¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
26.0 acres in NW¼ NE¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
92.9 acres - Total

Frances B. Hamilton, A. C. Musselman and George P. Morse (Map Sheet 4)

30.0 acres in NE¼ NE¼ of Section 12, T. 23 N., R. 3 E., M.D.B.& M.
30.0 acres in SE¼ NE¼ of Section 12, T. 23 N., R. 3 E., M.D.B.& M.
30.0 acres in SE¼ SE¼ of Section 1, T. 23 N., R. 3 E., M.D.B.& M.
10.0 acres in SW¼ SE¼ of Section 1, T. 23 N., R. 3 E., M.D.B.& M.
100.0 acres - Total

W. S. Hook and D. A. Hook (Map Sheet 3)

30.0 acres in Lots 8, 9, 10 and 11 of the Ackerman Tract in Section 17, T. 21 N., R. 2 E., M.D.B.& M.
30.0 acres - Total

W. S. Hook, Lillian M. Hook and D. A. Hook (Map Sheet 4)

3.0 acres in N½ N½ NE¼ of Section 23, T. 23 N., R. 3 E., M.D.B.& M.
3.0 acres - Total

Elmo Jacks and Louise Jacks (Map Sheet 3)

24.9 acres in Lot 7 of the Ackerman Tract in Section 17, T. 21 N., R. 2 E., M.D.B.& M.
24.9 acres - Total

Dorothy L. Jacobs and Thos. H. Jacobs (Map Sheet 4)

6.6 acres in SE¼ SE¼ of Section 15, T. 23 N., R. 3 E., M.D.B.& M.
10.0 acres in NE¼ NE¼ of Section 22, T. 23 N., R. 3 E., M.D.B.& M.
16.6 acres - Total

Johnston Rock Company (Map Sheet 3)

Industrial use in NW¼ SE¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.

A. P. Kundert (Map Sheet 4)

1.0 acre in Lot 11 of Section 34, T. 23 N., R. 3 E., M.D.B.& M.
1.0 acre - Total

J. A. Lewis (Map Sheet 2)

40.5 acres in N½ NW¼ of Section 15, T. 21 N., R. 1 E., M.D.B.& M.
40.5 acres - Total (In Dayton Mutual Water Company, Ltd.)
Section lines have been projected.

A. F. Lieurance (Map Sheet 3)

10.2 acres in SE¼ SW¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
38.2 acres in SW¼ SW¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
0.8 acre in NE¼ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
30.6 acres in SE¼ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
0.9 acre in SW¼ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in NE¼ NE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in SE¼ NE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in SW¼ NE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
34.0 acres in NW¼ NE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in NE¼ SE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in NW¼ SE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
9.4 acres in NE¼ SW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
9.8 acres in NE¼ NW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
15.3 acres in SE¼ NW¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.
33.2 acres in NE¼ NW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
22.1 acres in SE¼ NW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in SW¼ NW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in NW¼ NW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
2.6 acres in NE¼ SW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
40.0 acres in NW¼ SW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
527.1 acres - Total

J. H. Lucas (Map Sheet 5)

2.0 acres in NE¼ SE¼ of Section 11, T. 25 N., R. 3 E., M.D.B.& M.
2.0 acres - Total (Lomo)

J. H. Lucas, G. W. Lucas and C. F. Lucas (Map Sheet 6)

15.0 acres in NW¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
10.0 acres in NE¼ SW¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
5.0 acres in SE¼ SW¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
30.0 acres - Total (Butte Creek)

9.4 acres in NE¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
2.6 acres in SE¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
6.0 acres in SW¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
6.0 acres in NW¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
4.2 acres in SW¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
4.7 acres in SE¼ SW¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
32.9 acres - Total (Lucas & McGann Springs)

J. H. Lucas and Estate of William Johnson, deceased (Map Sheet 6)

20.4 acres in NW¼ NW¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.
17.9 acres in NE¼ NE¼ of Section 14, T. 26 N., R. 4 E., M.D.B.& M.
38.3 acres - Total (Jones Creek)

30.0 acres in NE¼ SW¼ of Section 12, T. 26 N., R. 4 E., M.D.B.& M.
10.0 acres in SE¼ SW¼ of Section 12, T. 26 N., R. 4 E., M.D.B.& M.
40.0 acres - Total (Willow Creek)

3.0 acres in NW¼ NE¼ of Section 3, T. 26 N., R. 4 E., M.D.B.& M.
12.0 acres in NE¼ NE¼ of Section 3, T. 26 N., R. 4 E., M.D.B.& M.
20.0 acres in SE¼ NE¼ of Section 3, T. 26 N., R. 4 E., M.D.B.& M.
10.0 acres in NE¼ SE¼ of Section 3, T. 26 N., R. 4 E., M.D.B.& M.
22.0 acres in NW¼ SW¼ of Section 2, T. 26 N., R. 4 E., M.D.B.& M.
8.0 acres in SW¼ SW¼ of Section 2, T. 26 N., R. 4 E., M.D.B.& M.
14.0 acres in NE¼ NW¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
6.0 acres in NW¼ NE¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
6.0 acres in SE¼ NW¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
24.0 acres in SW¼ NE¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
20.0 acres in NW¼ SE¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
5.0 acres in NE¼ SE¼ of Section 11, T. 26 N., R. 4 E., M.D.B.& M.
150.0 acres - Total (Colby Creek)

John J. Mahan and William J. Doyle (Map Sheet 6)

14.5 acres in SW¼ NW¼ of Section 26, T. 26 N., R. 5 E., M.D.B.& M.
6.8 acres in SE¼ NE¼ of Section 27, T. 26 N., R. 5 E., M.D.B.& M.
21.3 acres - Total

Elsie Hume Mann (Map Sheet 4)

1.0 acre in NW¼ NE¼ of Section 30, T. 22 N., R. 3 E., M.D.B.& M.
1.0 acre - Total

H. D. March and Henrietta March (Map Sheet 4)

5.7 acres in NW¼ NE¼ of Section 30, T. 22 N., R. 3 E., M.D.B.& M.
8.7 acres in SE¼ NW¼ of Section 30, T. 22 N., R. 3 E., M.D.B.& M.
14.4 acres - Total

M. & T. Incorporated (Map Sheet 2)

17.0 acres in Section 6, T. 21 N., R. 1 E., M.D.B.& M.
127.5 acres in Section 7, T. 21 N., R. 1 E., M.D.B.& M.
173.0 acres in Section 18, T. 21 N., R. 1 E., M.D.B.& M.
320.0 acres in Section 19, T. 21 N., R. 1 E., M.D.B.& M.
14.5 acres in Section 30, T. 21 N., R. 1 E., M.D.B.& M.
0.7 acre in Section 1, T. 21 N., R. 1 W., M.D.B.& M.

M. & T. Incorporated (Map Sheet 2)

481.4 acres in Section 12, T. 21 N., R. 1 W., M.D.B.& M.
380.4 acres in Section 13, T. 21 N., R. 1 W., M.D.B.& M.
290.0 acres in Section 24, T. 21 N., R. 1 W., M.D.B.& M.
193.0 acres in Section 25, T. 21 N., R. 1 W., M.D.B.& M.
1997.5 acres - Total (All in Rancho de Farwell)

Section lines have been projected.

Fannie M. McEnespy (Map Sheet 4)

1.5 acres in NE¼ SW¼ of Section 20, T. 22 N., R. 3 E., M.D.B.& M.
14.5 acres in NW¼ SW¼ of Section 20, T. 22 N., R. 3 E., M.D.B.& M.
7.6 acres in SE¼ NW¼ of Section 20, T. 22 N., R. 3 E., M.D.B.& M.
6.5 acres in SW¼ NW¼ of Section 20, T. 22 N., R. 3 E., M.D.B.& M.
30.1 acres - Total

W. J. McGann and Elizabeth T. Cussick (Map Sheet 6)

* 4.2 acres in SW¼ SE¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
* 4.7 acres in SE¼ SW¼ of Section 21, T. 26 N., R. 4 E., M.D.B.& M.
2.5 acres in NW¼ NE¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
23.0 acres in NE¼ NW¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
17.6 acres in NW¼ NE¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
7.0 acres in SE¼ NW¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
7.0 acres in SE¼ NW¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
0.8 acre in SW¼ NW¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
0.6 acre in NW¼ NW¼ of Section 28, T. 26 N., R. 4 E., M.D.B.& M.
0.9 acre in NE¼ NE¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.
68.3 acres - Total

*Denotes land on Lucas Ranch.

Geo. E. McLain (Map Sheet 3)

6.0 acres in SW¼ SE¼ of Section 31, T. 22 N., R. 2 E., M.D.B.& M.
6.0 acres - Total

C. J. McLain and L. H. McLain (Map Sheet 5)

Mining use in Section 3, T. 24 N., R. 3 E., M.D.B.& M.

Geo. E. McLain and C. J. McLain (Map Sheet 4)

0.4 acre in NE¼ NE¼ of Section 25, T. 22 N., R. 2 E., M.D.B.& M.
8.0 acres in SE¼ NE¼ of Section 25, T. 22 N., R. 2 E., M.D.B.& M.
6.8 acres in SW¼ NE¼ of Section 25, T. 22 N., R. 2 E., M.D.B.& M.
1.9 acres in NW¼ SE¼ of Section 25, T. 22 N., R. 2 E., M.D.B.& M.
17.1 acres - Total

B. A. Merrifield and Elizabeth C. Merrifield (Map Sheet 3)

50.5 acres in North part of Lot 35A of Durham State Land Settlement.
50.5 acres - Total.

Frank K. Mickey and J. H. Mindermann (Map Sheet 6)

19.2 acres in NW¼ NE¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.
*10.2 acres in SW¼ NE¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.
29.4 acres - Total

*Denotes land outside of property line.

Merritt Musselman and Florence V. Musselman (Map Sheet 4)

2.0 acres in SW¼ NW¼ of Section 7, T. 23 N., R. 4 E., M.D.B.& M.
2.0 acres - Total

The Orleans Mining Development and Explorations (Geo. H. Mathews) (Map Sheet 4)

Mining use in NW¼ NE¼ of Section 1, T. 23 N., R. 1 E., M.D.B.& M.

John L. Olson (Map Sheet 5)

Mining use in W½ SW¼ SE¼ of Section 23, T. 24 N., R. 3 E., M.D.B.& M.

Pacific Gas and Electric Company (Map Sheet 4)

2.0 acres in NE¼ NW¼ of Section 11, T. 23 N., R. 3 E., M.D.B.& M.
2.0 acres - Total

Hydroelectric power in NW¼ NW¼ of Section 10, T. 23 N., R. 3 E.,M.D.B.&M.
Hydroelectric power in NE¼ SE¼ of Section 5, T. 22 N., R. 3 E.,M.D.B.&M.

Paradise Irrigation District (Map Sheet 4)

1.0 acre in SE¼ SE¼ of Section 36, T. 23 N., R. 3 E., M.D.B.& M.
25.4 acres in NE¼ NE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
31.5 acres in SE¼ NE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
2.5 acres in SW¼ NE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
3.5 acres in NW¼ NE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
22.4 acres in NE¼ SE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
9.4 acres in SE¼ SE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
25.5 acres in SW¼ SE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
18.6 acres in NW¼ SE¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
5.9 acres in NE¼ SW¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
2.6 acres in SE¼ SW¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres in SW¼ SW¼ of Section 1, T. 22 N., R. 3 E., M.D.B.& M.
7.7 acres in NE¼ SW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
23.2 acres in SE¼ SW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
26.3 acres in SW¼ SW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
27.2 acres in NW¼ SW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
17.0 acres in SW¼ NW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
8.5 acres in NW¼ NW¼ of Section 6, T. 22 N., R. 4 E., M.D.B.& M.
17.9 acres in SE¼ SW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.

23.8 acres in SW¼ SW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.
2.6 acres in NE¼ NW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.
21.3 acres in SE¼ NW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.
28.1 acres in SW¼ NW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.
40.0 acres in NW¼ NW¼ of Section 7, T. 22 N., R. 4 E., M.D.B.& M.
8.5 acres in NE¼ SW¼ of Section 18, T. 22 N., R. 4 E., M.D.B.& M.
2.1 acres in NE¼ NW¼ of Section 18, T. 22 N., R. 4 E., M.D.B.& M.
4.2 acres in SE¼ NW¼ of Section 18, T. 22 N., R. 4 E., M.D.B.& M.
1.0 acre in SW¼ NW¼ of Section 18, T. 22 N., R. 4 E., M.D.B.& M.
6.4 acres in NW¼ NW¼ of Section 18, T. 22 N., R. 4 E., M.D.B.& M.
3.0 acres in SW¼ NE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
2.3 acres in NE¼ SE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
22.1 acres in SE¼ SE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
17.3 acres in SW¼ SE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
4.0 acres in NW¼ SE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres in NE¼ SW¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
25.5 acres in SE¼ SW¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
16.2 acres in SW¼ SW¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
23.0 acres in NE¼ NE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
2.0 acres in SE¼ NE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
14.5 acres in SW¼ NE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
20.0 acres in NW¼ NE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
3.4 acres in NE¼ SE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
10.2 acres in SE¼ SE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
6.8 acres in SW¼ SE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
2.8 acres in NW¼ SE¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
4.1 acres in SE¼ SW¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
9.4 acres in SW¼ SW¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
24.0 acres in SE¼ NW¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
25.5 acres in SW¼ NW¼ of Section 11, T. 22 N., R. 3 E., M.D.B.& M.
10.2 acres in NE¼ NE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
40.0 acres in SE¼ NE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
21.3 acres in SW¼ NE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
2.1 acres in NW¼ NE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
40.0 acres in NE¼ SE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
28.5 acres in SE¼ SE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
23.8 acres in SW¼ SE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
22.1 acres in NW¼ SE¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
20.9 acres in NE¼ SW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
31.5 acres in SE¼ SW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
30.0 acres in SW¼ SW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
14.5 acres in NW¼ SW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
28.0 acres in NE¼ NW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
27.2 acres in SE¼ NW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
12.0 acres in SW¼ NW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
7.5 acres in NW¼ NW¼ of Section 12, T. 22 N., R. 3 E., M.D.B.& M.
10.8 acres in NE¼ NE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
17.4 acres in SE¼ NE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
40.0 acres in SW¼ NE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
40.0 acres in NW¼ NE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.

9.4 acres in SW¼ SE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
3.4 acres in NW¼ SE¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres in SE¼ SW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
12.9 acres in SW¼ SW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
30.7 acres in NW¼ SW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
27.2 acres in NE¼ NW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
21.3 acres in SE¼ NW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
6.0 acres in SW¼ NW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
35.7 acres in NW¼ NW¼ of Section 13, T. 22 N., R. 3 E., M.D.B.& M.
39.0 acres in NE¼ NE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
32.4 acres in SE¼ NE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
20.4 acres in SW¼ NE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
40.0 acres in NW¼ NE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
36.2 acres in NE¼ SE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
22.1 acres in SE¼ SE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
28.9 acres in SW¼ SE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
18.7 acres in NW¼ SE¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
31.5 acres in SE¼ SW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
31.5 acres in SW¼ SW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
11.9 acres in NW¼ SW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
7.8 acres in NE¼ NW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
4.3 acres in SE¼ NW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
17.0 acres in SW¼ NW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
2.6 acres in NW¼ NW¼ of Section 14, T. 22 N., R. 3 E., M.D.B.& M.
16.2 acres in SE¼ NE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
27.2 acres in SW¼ NE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
4.3 acres in NW¼ NE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
17.9 acres in NE¼ SE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
39.0 acres in SE¼ SE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
29.7 acres in SW¼ SE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
16.2 acres in NW¼ SE¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
2.6 acres in NE¼ SW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
15.3 acres in SE¼ SW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
0.4 acre in SW¼ SW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
29.8 acres in NW¼ SW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
0.2 acre in NE¼ NW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
2.7 acres in SE¼ NW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
29.0 acres in SW¼ NW¼ of Section 15, T. 22 N., R. 3 E., M.D.B.& M.
6.8 acres in SE¼ NE¼ of Section 16, T. 22 N., R. 3 E., M.D.B.& M.
29.8 acres in NE¼ SE¼ of Section 16, T. 22 N., R. 3 E., M.D.B.& M.
12.0 acres in SE¼ SE¼ of Section 16, T. 22 N., R. 3 E., M.D.B.& M.
4.8 acres in SW¼ SE¼ of Section 16, T. 22 N., R. 3 E., M.D.B.& M.
8.2 acres in NW¼ SE¼ of Section 16, T. 22 N., R. 3 E., M.D.B.& M.
11.0 acres in SE¼ NE¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
34.9 acres in NE¼ SE¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
32.8 acres in SE¼ SE¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
36.4 acres in SW¼ SE¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
18.7 acres in NW¼ SE¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
5.9 acres in NE¼ SW¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
15.3 acres in SE¼ SW¼ of Section 21, T. 22 N., R. 3 E., M.D.B.& M.
37.4 acres in NE¼ NE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.

Paradise Irrigation District (Cont'd.) (Map Sheet 4)

28.9 acres in SE¼ NE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
22.0 acres in SW¼ NE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
33.0 acres in NW¼ NE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
13.0 acres in NE¼ SE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
12.8 acres in SE¼ SE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
33.2 acres in SW¼ SE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
24.7 acres in NW¼ SE¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
30.6 acres in NE¼ SW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
39.0 acres in NW¼ SW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
36.0 acres in NE¼ NW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
39.0 acres in SE¼ NW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
31.4 acres in SW¼ NW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
15.3 acres in NW¼ NW¼ of Section 22, T. 22 N., R. 3 E., M.D.B.& M.
20.0 acres in NE¼ NE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
11.0 acres in SE¼ NE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
8.5 acres in SW¼ NE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
17.9 acres in NW¼ NE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
14.5 acres in SW¼ SE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
23.8 acres in NW¼ SE¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
31.2 acres in NE¼ SW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
24.7 acres in SE¼ SW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
9.4 acres in NW¼ SW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
38.0 acres in NE¼ NW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
27.2 acres in SE¼ NW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
19.6 acres in SW¼ NW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
32.0 acres in NW¼ NW¼ of Section 23, T. 22 N., R. 3 E., M.D.B.& M.
22.0 acres in SE¼ NE¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
7.7 acres in NE¼ SE¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
0.9 acre in SE¼ SE¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
9.1 acres in SW¼ SE¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
30.6 acres in NE¼ SW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
4.3 acres in SW¼ SW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
8.9 acres in NW¼ SW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
10.2 acres in NE¼ NW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
2.6 acres in SE¼ NW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
11.0 acres in SW¼ NW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
20.0 acres in NW¼ NW¼ of Section 24, T. 22 N., R. 3 E., M.D.B.& M.
0.9 acre in NE¼ NE¼ of Section 25, T. 22 N., R. 3 E., M.D.B.& M.
1.2 acres in NW¼ NE¼ of Section 25, T. 22 N., R. 3 E., M.D.B.& M.
10.2 acres in SW¼ NW¼ of Section 25, T. 22 N., R. 3 E., M.D.B.& M.
9.3 acres in NW¼ NW¼ of Section 25, T. 22 N., R. 3 E., M.D.B.& M.
16.2 acres in NE¼ NE¼ of Section 26, T. 22 N., R. 3 E., M.D.B.& M.
10.4 acres in SE¼ NE¼ of Section 26, T. 22 N., R. 3 E., M.D.B.& M.
19.7 acres in NE¼ NE¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
2.6 acres in SE¼ NE¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
0.7 acre in SW¼ NE¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
19.5 acres in NW¼ NE¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
4.3 acres in SW¼ SW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres in NW¼ SW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
13.6 acres in NE¼ NW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
5.1 acres in SE¼ NW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.

Paradise Irrigation District (Cont'd.) (Map Sheet 4)

21.2 acres in SW¼ NW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
6.8 acres in NW¼ NW¼ of Section 27, T. 22 N., R. 3 E., M.D.B.& M.
7.2 acres in NE¼ NE¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
24.3 acres in NW¼ NE¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
11.6 acres in NE¼ SE¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
2.8 acres in SE¼ SE¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
10.2 acres in NW¼ SE¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
5.1 acres in NE¼ SW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
5.5 acres in SE¼ SW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
2.5 acres in SW¼ SW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
28.9 acres in NW¼ SW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
28.5 acres in NE¼ NW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
26.4 acres in SE¼ NW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
18.7 acres in SW¼ NW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
4.2 acres in NW¼ NW¼ of Section 28, T. 22 N., R. 3 E., M.D.B.& M.
3229.4 acres - Total

Parrott Investment Company (Map Sheet 1)

197.0 acres in Section 31, T. 21 N., R. 1 E., M.D.B.& M.
178.1 acres in Section 36, T. 21 N., R. 1 W., M.D.B.& M.
280.6 acres in Section 6, T. 20 N., R. 1 E., M.D.B.& M.
272.2 acres in Section 7, T. 20 N., R. 1 E., M.D.B.& M.
270.5 acres in Section 18, T. 20 N., R. 1 E., M.D.B.& M.
179.8 acres in Section 19, T. 20 N., R. 1 E., M.D.B.& M.
13.5 acres in Section 30, T. 20 N., R. 1 E., M.D.B.& M.
60.5 acres in Section 31, T. 20 N., R. 1 E., M.D.B.& M.
356.2 acres in Section 1, T. 20 N., R. 1 W., M.D.B.& M.
75.6 acres in Section 10, T. 20 N., R. 1 W., M.D.B.& M.
176.4 acres in Section 11, T. 20 N., R. 1 W., M.D.B.& M.
174.7 acres in Section 12, T. 20 N., R. 1 W., M.D.B.& M.
93.6 acres in Section 13, T. 20 N., R. 1 W., M.D.B.& M.
375.0 acres in Section 14, T. 20 N., R. 1 W., M.D.B.& M.
306.6 acres in Section 15, T. 20 N., R. 1 W., M.D.B.& M.
56.3 acres in Section 16, T. 20 N., R. 1 W., M.D.B.& M.
62.6 acres in Section 21, T. 20 N., R. 1 W., M.D.B.& M.
70.5 acres in Section 22, T. 20 N., R. 1 W., M.D.B.& M.
534.2 acres in Section 23, T. 20 N., R. 1 W., M.D.B.& M.
264.6 acres in Section 24, T. 20 N., R. 1 W., M.D.B.& M.
462.0 acres in Section 25, T. 20 N., R. 1 W., M.D.B.& M.
542.0 acres in Section 26, T. 20 N., R. 1 W., M.D.B.& M.
148.7 acres in Section 27, T. 20 N., R. 1 W., M.D.B.& M.
30.1 acres in Section 34, T. 20 N., R. 1 W., M.D.B.& M.
573.9 acres in Section 35, T. 20 N., R. 1 W., M.D.B.& M.
396.0 acres in Section 36, T. 20 N., R. 1 W., M.D.B.& M.
10.9 acres in Section 2, T. 19 N., R. 1 W., M.D.B.& M.
7.1 acres in Section 3, T. 19 N., R. 1 W., M.D.B.& M.
6159.2 acres - Total (All in Llano Seco Rancho)
Section lines have been projected

Parrott Investment Company (Cont'd.) (Map Sheet 3)

119.0 acres in Section 6, T. 21 N., R. 2 E., M.D.B.& M.
83.5 acres in Section 17, T. 21 N., R. 2 E., M.D.B.& M.
8.5 acres in Section 16, T. 21 N., R. 2 E., M.D.B.& M.
211.0 acres - Total (All in Rancho Esquon)
Section lines have been projected.

Orval L. Pearson, Roy L. Pearson, Eunice A. Cartwright and Mildred Laughlin (Map Sheet 4)

3.0 acres in NW¼ SE¼ of Section 34, T. 23 N., R. 3 E., M.D.B.& M.
3.0 acres - Total

Jack L. Post (Map Sheet 4)

Mining use in NW¼ and N½ NE¼ of Section 10, T. 22 N., R. 3 E., M.D.B.& M.
S½ S½ SW¼, S½ SW¼ SE¼ and SW¼ SE¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.

Paul Ripley (Map Sheet 4)

Hydro-mechanical power in Section 2, T. 22 N., R. 3 E., M.D.B.& M.

Ellenore K. Robbins and Samuel P. Robbins (Map Sheet 4)

7.3 acres in SW¼ SE¼ of Section 22, T. 23 N., R. 3 E., M.D.B.& M.
7.3 acres - Total

Mary E. Roth (Map Sheet 3)

3.4 acres in NW¼ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
3.4 acres - Total

Joe A. Sagi (Map Sheet 4)

11.6 acres in SE¼ SE¼ of Section 14, T. 23 N., R. 3 E., M.D.B.& M.
11.6 acres - Total

George Setka, Anna Setka, Joe Bebich, Sam Bebich and Steve Vlatkovich (Map Sheet 3)

14.0 acres in SE¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
31.6 acres in SW¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
1.7 acres in SE¼ SW¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.

George Setka, Anna Setka, Joe Bebich, Sam Bebich and Steve Vlatkovich (Cont'd.) (Map Sheet 3)

9.3 acres in NE¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
0.2 acre in SE¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
3.2 acres in SW¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
36.5 acres in NW¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
0.2 acre in NE¼ NW¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
96.7 acres - Total

H. W. Skillin and Alice Skillin (Map Sheet 4)

2.3 acres in NE¼ SE¼ of Section 19, T. 22 N., R. 3 E., M.D.B.& M.
5.1 acres in SE¼ SE¼ of Section 19, T. 22 N., R. 3 E., M.D.B.& M.
2.0 acres in SW¼ SE¼ of Section 19, T. 22 N., R. 3 E., M.D.B.& M.
9.4 acres - Total

Almon E. Smith (Map Sheet 4)

Mining use in NW¼ NE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.

Margaret A. Smith (Map Sheet 5)

Domestic and hydro-mechanical use in SE¼ NE¼ of Section 22, T. 24 N., R. 3 E., M.D.B.& M.

S. C. Sorensen (Map Sheet 4)

Mining use in SW¼ SW¼ of Section 28, T. 23 N., R. 3 E., M.D.B.& M.

Anna Spangler (Map Sheet 5)

1.0 acre in NW¼ NW¼ of Section 36, T. 24 N., R. 3 E., M.D.B.& M., and domestic use in N½ NW¼, N½ S½ NW¼, and N½ N½ NE¼ of said Section 36.

L. B. Stephenson (Map Sheet 6)

25.0 acres in NE¼ SW¼ Section 21, T. 26 N., R. 5 E., M.D.B.& M.
25.0 acres - Total

W. C. Stevens (Map Sheet 2)

81.8 acres in Section 16, T. 21 N., R. 1 E., M.D.B.& M.
181.9 acres in Section 17, T. 21 N., R. 1 E., M.D.B.& M.
148.0 acres in Section 18, T. 21 N., R. 1 E., M.D.B.& M.

W. C. Stevens (Cont'd.) (Map Sheet 2)

76.5 acres in Section 19, T. 21 N., R. 1 E., M.D.B.& M.
19.0 acres in Section 20, T. 21 N., R. 1 E., M.D.B.& M.
92.5 acres in Section 21, T. 21 N., R. 1 E., M.D.B.& M.
599.7 acres - Total (In Dayton Mutual Water Company, Ltd.)
Section lines have been projected.

Carl Nelson Swartz and Esther M. Swartz (Map Sheet 4)

4.0 acres in NW¼ NE¼ of Section 22, T. 23 N., R. 3 E., M.D.B.& M.
11.0 acres in SW¼ NE¼ of Section 22, T. 23 N., R. 3 E., M.D.B.& M.
15.0 acres - Total

Grace D. Taylor (Map Sheet 6)

Domestic use in fractional SE¼ NW¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.

4.0 acres in SW¼ NW¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.
1.0 acre in NW¼ SW¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.
5.0 acres - Total

Lester K. Thomasson, N. H. Thomasson, Beryl V. Thomasson, Zelma L. Stevens and Effie M. Bruce (Map Sheet 3)

15.0 acres in SW¼ SE¼ of Section 36, T. 22 N., R. 1 E., M.D.B.& M.
40.0 acres in SE¼ SW¼ of Section 36, T. 22 N., R. 1 E., M.D.B.& M.
20.0 acres in SW¼ SW¼ of Section 36, T. 22 N., R. 1 E., M.D.B.& M.
6.0 acres in NE¼ SW¼ of Section 36, T. 22 N., R. 1 E., M.D.B.& M.
80.0 acres in N½ NW¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
38.0 acres in NW¼ NE¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
3.0 acres in NE¼ NE¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
6.0 acres in SW¼ NE¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
35.0 acres in SE¼ NW¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
38.0 acres in SW¼ NW¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
18.0 acres in NW¼ SW¼ of Section 1, T. 21 N., R. 1 E., M.D.B.& M.
6.0 acres in SE¼ NE¼ of Section 2, T. 21 N., R. 1 E., M.D.B.& M.
305.0 acres - Total

United States Department of Agriculture (Lassen National Forest) (Map Sheet 6)

(Jonesville Blocks 1 and 2)
Domestic use in S½ SW¼ of Section 7, T. 26 N., R. 5 E., M.D.B.& M.,
Domestic use in N½ NW¼ of Section 18, T. 26 N., R. 5 E., M.D.B.& M.,
Domestic use in S½ NE¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.,
and irrigation use and stock-water on
10.2 acres in SW¼ NE¼ of Section 13, T. 26 N., R. 4 E., M.D.B.& M.

United States Department of Agriculture (Lassen National Forest)(Cont'd.)
(Map Sheet 6)

(Butte Meadows Guard Station, Camp Ground & Summer Home Tract)
Domestic use in NE¼ SE¼ of Section 30, T. 26 N., R. 4 E., M.D.B.& M.

United States Department of Agriculture (Plant Introduction Station)
(Map Sheet 3)

0.5	acre	in SW¼ SW¼	of Section	32, T. 22 N.,	R. 2 E., M.D.B.& M.
27.8	acres	in NW¼ NW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
24.7	acres	in NE¼ NW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
40.0	acres	in SE¼ NW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
38.0	acres	in SW¼ NW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
14.5	acres	in NE¼ SW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
3.0	acres	in NW¼ SW¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
2.3	acres	in NW¼ SE¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
1.4	acres	in NW¼ NE¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
2.3	acres	in SW¼ NE¼	of Section	5, T. 21 N.,	R. 2 E., M.D.B.& M.
154.5	acres - Total				

(Map Sheet 4)

S. A Vandegrift

Domestic and stock-watering purposes on 640.0 acres in Section 26 and 590.0 acres in Section 23, T. 23 N., R. 3 E., M.D.B.& M. (Middle Butte Creek and West Branch thereof).

Domestic and stock-watering purposes on 320.0 acres in W½ of Section 25 and 80.0 acres in W½ NE¼ of Section 36, T. 23 N., R. 3 E., M.D.B.& M. (Vandegrift Spring and Little Butte Creek).

2.0 acres in SE¼ NW¼ of Section 35, T. 23 N., R. 3 E., M.D.B.& M.
2.0 acres - Total, also domestic and stock-watering purposes on 80.0 acres in S½ NW¼ of said Section 35. (Michaels Spring).

Domestic, stock-watering and industrial purposes on 80.0 acres in E½, SW¼, 80.0 acres in W½ SE¼ and 77.0 acres in S½ NW¼ of Section 11, T. 23 N., R. 3 E., M.D.B.& M. (Butte Creek).

(Map Sheet 4)

Vandegrift Trust

15.0	acres	in NE¼ SE¼	of Section	2, T. 23 N.,	R. 3 E., M.D.B.& M.
35.0	acres	in SE¼ SE¼	of Section	2, T. 23 N.,	R. 3 E., M.D.B.& M.
1.0	acre	in SW¼ SE¼	of Section	2, T. 23 N.,	R. 3 E., M.D.B.& M.
35.0	acres	in NE¼ NE¼	of Section	11, T. 23 N.,	R. 3 E., M.D.B.& M.
87.0	acres - Total				

Stephen Vernoga (Map Sheet 3)

0.2 acre in SE¼ NE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
16.2 acres in NE¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
1.0 acre in SE¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
4.9 acres in SW¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
25.0 acres in NW¼ SE¼ of Section 19, T. 21 N., R. 2 E., M.D.B.& M.
47.3 acres - Total

Varney F. Wakefield (Map Sheet 3)

0.2 acre in NE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
3.9 acre in SE¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
7.5 acres in SW¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
2.4 acres in NW¼ NW¼ of Section 17, T. 21 N., R. 2 E., M.D.B.& M.
14.0 acres - Total

W. H. Walker (Map Sheet 4)

2.1 acres in NW¼ NE¼ of Section 1, T. 23 N., R. 3 E., M.D.B.& M.
4.4 acres in NE¼ NE¼ of Section 1, T. 23 N., R. 3 E., M.D.B.& M.
6.5 acres - Total

David S. Webb and Mary D. Webb (Map Sheet 5)

2.0 acres in S½ SW¼ SW¼ of Section 24, T. 24 N., R. 3 E., M.D.B.& M.
2.0 acres - Total

Eleanor Propfe Welch (Map Sheet 6)

Domestic purposes in NE¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.

Western Canal Company

30.0 acres in SE¼ of Section 35, T. 20 N., R. 1 W., M.D.B.& M.
319.0 acres in S½ of Section 36, T. 20 N., R. 1 W., M.D.B.& M.
70.0 acres in E½ SW¼ of Section 6, T. 20 N., R. 1 E., M.D.B.& M.
472.0 acres in E½ and E½ W½ of Section 7, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 9, T. 20 N., R. 1 E., M.D.B.& M.
126.0 acres in E½ of Section 10, T. 20 N., R. 1 E., M.D.B.& M.
620.0 acres in Section 13, T. 20 N., R. 1 E., M.D.B.& M.
427.0 acres in Section 14, T. 20 N., R. 1 E., M.D.B.& M.
620.0 acres in Section 15, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 16, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 17, T. 20 N., R. 1 E., M.D.B.& M.
480.0 acres in E½ and E½ W½ of Section 18, T. 20 N., R. 1 E., M.D.B.& M.
480.0 acres in Section 19, T. 20 N., R. 1 E., M.D.B.& M.

Western Canal Company (Cont'd.)

640.0 acres in Section 20, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 21, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 22, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 23, T. 20 N., R. 1 E., M.D.B.& M.
150.0 acres in N½ and NW¼ SW¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
125.0 acres in NE¼ of Section 26, T. 20 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 27, T. 20 N., R. 1 E., M.D.B.& M.
630.0 acres in Section 28, T. 20 N., R. 1 E., M.D.B.& M.
320.0 acres in N½ of Section 29, T. 20 N., R. 1 E., M.D.B.& M.
390.0 acres in E½ and Fctl. E½ W½ of Section 30, T. 20 N., R. 1 E., M.D.B.& M.

640.0 acres in Section 33, T. 20 N., R. 1 E., M.D.B.& M.
315.0 acres in N½ and SW¼ of Section 34, T. 20 N., R. 1 E., M.D.B.& M.
550.0 acres in Section 1, T. 19 N., R. 1 W., M.D.B.& M.
595.0 acres in Section 2, T. 19 N., R. 1 W., M.D.B.& M.
145.0 acres in Fctl. E½ of Section 3, T. 19 N., R. 1 W., M.D.B.& M.
45.0 acres in Fctl. NE¼ of Section 10, T. 19 N., R. 1 W., M.D.B.& M.
625.0 acres in Section 11, T. 19 N., R. 1 W., M.D.B.& M.
560.0 acres in Section 12, T. 19 N., R. 1 W., M.D.B.& M.
570.0 acres in Section 13, T. 19 N., R. 1 W., M.D.B.& M.
585.0 acres in Section 14, T. 19 N., R. 1 W., M.D.B.& M.
115.0 acres in Fctl. E½ E½ of Section 15, T. 19 N., R. 1 W., M.D.B.& M.
400.0 acres in Section 23, T. 19 N., R. 1 W., M.D.B.& M.
360.0 acres in N½, SE¼ and Fctl. SW¼ of Section 24, T. 19 N., R. 1 W., M.D.B.& M.

315.0 acres in Section 25, T. 19 N., R. 1 W., M.D.B.& M.
80.0 acres in Fctl. NW¼ of Section 26, T. 19 N., R. 1 W., M.D.B.& M.
70.0 acres in Fctl. NE¼ of Section 36, T. 19 N., R. 1 W., M.D.B.& M.
320.0 acres in E½ of Section 5, T. 19 N., R. 1 E., M.D.B.& M.
320.0 acres in Section 6, T. 19 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 7, T. 19 N., R. 1 E., M.D.B.& M.
223.0 acres in projected Section 8, T. 19 N., R. 1 E., M.D.B.& M.
497.0 acres in projected Section 17, T. 19 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 18, T. 19 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 19, T. 19 N., R. 1 E., M.D.B.& M.
620.0 acres in projected Section 20, T. 19 N., R. 1 E., M.D.B.& M.
60.0 acres in projected Section 28, T. 19 N., R. 1 E., M.D.B.& M.
395.0 acres in projected Section 29, T. 19 N., R. 1 E., M.D.B.& M.
640.0 acres in Section 30, T. 19 N., R. 1 E., M.D.B.& M.
400.0 acres in N½ and Fctl. SW¼ of Section 31, T. 19 N., R. 1 E., M.D.B.& M.

20.0 acres in SW¼ of projected Section 33, T. 19 N., R. 1 E., M.D.B.& M.
225.0 acres in E½ of Section 5, T. 18 N., R. 1 E., M.D.B.& M.
180.0 acres in E½ of Section 8, T. 18,N., R. 1 E., M.D.B.& M.
22,129.0 acres - Total.

(Map Sheet 3)

L. E. Wheelock and Nellie Wheelock

13.0 acres in SW¼ NE¼ of Section 30, T. 21 N., R. 2 E., M.D.B.& M.
13.0 acres - Total (Section lines projected).

(Map Sheet 3)

E. E. White

20.0 acres in SE¼ SE¼ of Section 13, T. 20 N., R. 1 E., M.D.B.& M.
30.0 acres in NE¼ NE¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
40.0 acres in SE¼ NE¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
22.0 acres in SW¼ NE¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
160.0 acres in SE¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
35.0 acres in NE¼ SW¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
40.0 acres in SE¼ SW¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
3.0 acres in NW¼ SW¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
35.0 acres in SW¼ SW¼ of Section 24, T. 20 N., R. 1 E., M.D.B.& M.
6.6 acres in SE¼ SE¼ of Section 23, T. 20 N., R. 1 E., M.D.B.& M.
37.0 acres in NE¼ NE¼ of Section 26, T. 20 N., R. 1 E., M.D.B.& M.
3.0 acres in NW¼ NE¼ of Section 26, T. 20 N., R. 1 E., M.D.B.& M.
55.0 acres in Section 24, T. 20 N., R. 1 E., M.D.B.& M., lying between the Butte Creek levees.
486.6 acres - Total (Section lines are projected)

(Map Sheet 3)

Roy White

32.0 acres in Lot 62B of Durham State Land Settlement.
21.0 acres in Lot 62A of Durham State Land Settlement.
53.0 acres - Total

(Map Sheet 4)

F. E. Whitlock

10.0 acres in Lot 6 of Section 34, T. 23 N., R. 3 E., M.D.B.& M., lying South and East of the Upper Centerville Canal.
10.0 acres - Total

(Map Sheet 3)

Herbert W. Whitten and Marjorie C. Whitten

13.6 acres in N½ NW¼ of Section 15, T. 20 N., R. 2 E., M.D.B.& M.
27.2 acres in that portion of N½ N½ of Section 16, T. 20 N., R. 2 E., M.D.B.& M., lying NE of Northern Electric Railroad.
94.0 acres in SW¼ of Section 10, T. 20 N., R. 2 E., M.D.B.& M.
54.0 acres in NW¼ of Section 10, T. 20 N., R. 2 E., M.D.B.& M.
15.0 acres in SE¼ NE¼ of Section 8, T. 20 N., R. 2 E., M.D.B.& M.
160.0 acres in SE¼ of Section 9, T. 20 N., R. 2 E., M.D.B.& M.
187.0 acres in N½ of Section 9, T. 20 N., R. 2 E., M.D.B.& M.
114.5 acres in that portion of SW¼ of Section 9, T. 20 N., R. 2 E., lying NE of Northern Electric Railroad.
665.3 acres - Total (All in Rancho Esquon) Section lines have been projected.

Herbert W. Whitten and Marjorie C. Whitten 5/8, Olive M. Young 1/8, George Mead and Anna Mead 1/8, T. H. Polk and Lucia V. Polk 1/8. (Map Sheet 4)

Mining and domestic purposes on the following described lands:

NE¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
SE¼ NE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
SE¼ SE¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
N½ SE¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
N½ SW¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M. and that portion of the following described land lying East of the center of Middle Butte Creek:
NE¼ NE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
NW¼ NE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
SW¼ NE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.
NW¼ SE¼ of Section 3, T. 22 N., R. 3 E., M.D.B.& M.

(Map Sheet 3)

Yuba Consolidated Gold Fields

Mining use on the following described lands:

NW¼ of Section 8, T. 21 N., R. 2 E., M.D.B.& M.
SW¼ of Section 5, T. 21 N., R. 2 E., M.D.B.& M.
E½ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
E½ W½ SE¼ of Section 6, T. 21 N., R. 2 E., M.D.B.& M.
NE¼ of Section 7, T. 21 N., R. 2 E., M.D.B.& M.

TABLE 2

POINTS OF DIVERSION FROM BUTTE CREEK
AND ITS TRIBUTARIES

Name of Diversion System	Number of Diversion on Division of Water Resources Map	Approximate Location of Point of Diversion: Legal Sub-Division in which diversion occurs M.D.B.& M.	Reference corner for distance and bearing M.D.B.& M.	Bearing from reference corner	Distance in feet from reference corner	Map Sheet No.
Jonesville Block 1	1	SW¼ SW¼ Sec. 7 T 26 N, R 5 E	SW Cor. Sec. 7 T 26 N, R 5 E	N 67° E	1050	6
Mickey-Minderman Spring	2	SE¼ NE¼ Sec. 13 T 26 N, R 4 E	NE Cor. Sec. 13 T 26 N, R 4 E	S 21°30'W	1900	6
Mickey (Jones)	3	NE¼ NE¼ Sec. 13 T 26 N, R 4 E	NE Cor. Sec. 13 T 26 N, R 4 E	S 31°30'W	1440	6
Mickey-Minderman	4	NW¼ NE¼ Sec. 13 T 26 N, R 4 E	NE Cor. Sec. 13 T 26 N, R 4 E	S 53° W	1950	6
Lucas-Jones	5	NW¼ NW¼ Sec. 13 T 26 N, R 4 E	NW Cor. Sec. 13 T 26 N, R 4 E	S 63°30'E	1430	6
Willow Creek and Kennedy Pipe	5A	NE¼ SW¼ Sec. 12 T 26 N, R 4 E	W¼ Cor. Sec. 12 T 26 N, R 4 E	S 86° E	1600	6
		SE¼ NW¼ Sec. 12 T 26 N, R 4 E	W¼ Cor. Sec. 12 T 26 N, R 4 E	N 88° E	1600	6
Colby Creek	5B	At various points on Colby Creek between NE¼ Sec. 3 and SE¼ Sec. 11, T 26 N, R 4 E				6
Cirby	6	SW¼ NW¼ Sec. 26 T 26 N, R 5 E	W¼ Cor. Sec. 26 T 26 N, R 5 E	N 52° E	1300	6
Stevenson Upper	7	NE¼ NE¼ Sec. 28 T 26 N, R 5 E	NE Cor. Sec. 28 T 26 N, R 5 E	S 20° W	720	6
Stevenson Lower	8	NE¼ NE¼ Sec. 28 T 26 N, R 5 E	NE Cor. Sec. 28 T 26 N, R 5 E	S 46°30'W	680	6
Abietine	8A	SE¼ SW¼ Sec. 21 T 26 N, R 5 E	S¼ Cor. Sec. 21 T 26 N, R 5 E	N 1° W	250	6
	8B	NE¼ SW¼ Sec. 21 T 26 N, R 5 E	Center Sec. 21 T 26 N, R 5 E	S 45° W	400	6
	8C	SE¼ NW¼ Sec. 21 T 26 N, R 5 E	W¼ Cor. Sec. 21 T 26 N, R 5 E	N 60° E	200	6
Lucas Springs	9	NE¼ SE¼ Sec. 21 T 26 N, R 4 E	W¼ Cor. Sec. 21 T 26 N, R 4 E	S 55°30'W	1500	6
McGann Springs	9A	SE¼ of SW¼ and SW¼ SE¼ of Sec. 21, T 26 N, R4 E	N¼ Cor. Sec. 28 T 26 N, R 4 E	Due North	600	6
Diamond Match	10	SE¼ NE¼ Sec. 28 T 26 N, R 4 E	E¼ Cor. Sec. 28 T 26 N, R 4 E	N 66°30'W	950	6
	10A	NW¼ NE¼ Sec. 17 T 25 N, R 4 E	NE Cor. Sec. 17 T 25 N, R 4 E	S 70° W	1650	5
	10B	SW¼ NE¼ Sec. 5 T 24 N, R 4 E	NE Cor. Sec. 5 T 24 N, R 4 E	S 45° W	2050	5
	10C	NE¼ SE¼ Sec. 34 T 25 N, R 3 E	SE Cor. Sec. 34 T 25 N, R 3 E	N 1° W	1900	5
Olson	11	SW¼ SE¼ Sec. 23 T 24 N, R 3 E	SE Cor. Sec. 23 T 24 N, R 3 E	N 70°30'W	2000	5

TABLE 2 (Cont'd.)

Name of Diversion System	Number of Diversion on Division of Water Resources Map	Approximate Location of Point of Diversion: Legal Sub-Division in which diversion occurs (M.D.B.& M.)	Reference corner for distance and bearing (M.D.B.& M.)	Bearing from reference corner	Distance in feet from reference corner	Map Sheet No.
Crewe	12	SE¼ NE¼ Sec. 24 T 24 N, R 3 E	E¼ Cor, Sec. 24 T 24 N, R 3 E	N 57° W	1480	5
Webb	13	NE¼ SW¼ Sec. 24 T 24 N, R 3 E	SW Cor. Sec. 24 T 24 N, R 3 E	N 54° E	2500	5
Duensing	14	NW¼ NW¼ Sec. 36 T 24 N, R 3 E	NW Cor. Sec. 36 T 24 N, R 3 E	S 35° E	1500	5
Duensing Spring	14A	SW¼ NW¼ Sec. 36 T 24 N, R 3 E	W¼ Cor. Sec. 36 T 24 N, R 3 E	N 79° E	1000	5
Toad Town	15	SW¼ NW¼ Sec. 36 T 24 N, R 3 E	NW Cor. Sec. 36 T 24 N, R 3 E	S 31° E	2150	5
Walker	16	NE¼ NE¼ Sec. 1 T 23 N, R 3 E	NE Cor. Sec. 1 T 23 N, R 3 E	S 47° W	1140	4
Downs Spring	17	NE¼ SE¼ Sec. 1 T 23 N, R 3 E	E¼ Cor. Sec. 1 T 23 N, R 3 E	S 81° W	1150	4
	16A	NE¼ NE¼ Sec. 1 T 23 N, R 3 E	NE Cor. Sec. 1 T 23 N, R 3 E	S 47° W	1140	4
Hamilton (Musselman)	18	SE¼ SE¼ Sec. 1 T 23 N, R 3 E	E¼ Cor. Sec. 1 T 23 N, R 3 E	S 16°30' W	1460	4
Mosquito	19	SW¼ NW¼ Sec. 18 T 23 N, R 4 E	W¼ Cor. Sec. 18 T 23 N, R 4 E	N 38° E	1380	4
Richardson	20 20A	Four points from Little Butte Creek between a point N 3° 30' W 980 feet from the E¼ Cor. Sec. 2 and a point due south 950 feet from the NE Cor. Sec. 11, T 23 N, R 3 E				4
Meadowbrook	21	NW¼ SE¼ Sec. 2 T 23 N, R 3 E	E¼ Cor. Sec. 2 T 23 N, R 3 E	S 56° W	1600	4
Paradise Irrigation District	22	SE¼ SE¼ Sec. 25 T 23 N, R 3 E	SE Cor. Sec. 25 T 23 N, R 3 E	N 59° W	1380	4
Nickerson	23	SE¼ SE¼ Sec. 25 T 23 N, R 3 E	SE Cor. Sec. 25 T 23 N, R 3 E	N 76°30' W	1200	4
Vandegrift	23A	NE¼ NE¼ Sec. 36 T 23 N, R 3 E	NE Cor. Sec. 36 T 23 N, R 3 E	Due W	1300	4
Sagi Pipes	24	Three points between the North and South boundary lines of SE¼ Sec. 14, T 23 N, R 3 E.				4
Hook	24A	NE¼ NE¼ Sec. 23 T 23 N, R 3 E	NE Cor. Sec. 23 T 23 N, R 3 E	S 88° W	1000	4
Vandegrift Middle Butte	24B	In channel between a point S 85° W 1400 feet from the NE Corner of Section 23, T 23 N, R 3 E and a point due East 300 feet from the SW Corner of Section 26, T 23 N, R 3 E				4
Vandegrift Spring	24C	SE¼ SW¼ Sec. 24 T 23 N, R 3 E	SW Cor. Sec. 24 T 23 N, R 3 E	N 85° E	1500	4
Vandegrift West Branch	24D	NW¼ NW¼ Sec. 23 T 23 N, R 3 E	NW Cor. Sec. 23 T 23 N, R 3 E	S 80° E	300	4
Michael	24E	NW¼ NE¼ Sec. 35 T 23 N, R 3 E	NE Cor. Sec. 35 T 23 N, R 3 E	S 85° W	2100	4

TABLE 2 (Cont'd.)

Name of Diversion System	Number of Diversion on Division of Water Resources Map	Approximate Location of Point of Diversion: Legal Sub-Division in which diversion occurs (M.D.B.& M.)	Reference corner for distance and bearing (M.D.B.& M.)	Bearing from reference corner	Distance in feet from reference corner	Map Sheet No.
Hupp	25	SW¼ NE¼ Sec. 23 T 23 N, R 3 E	E¼ Cor. Sec. 23 T 23 N, R 3 E	N 73° W	2200	4
Evers Spring	25A	Lot 1 Sec. 22 T 23 N, R 3 E	NE Cor. Sec. 22 T 23 N, R 3 E	S 75° W	2100	4
A. E. Smith (Ethel)	26	SE¼ SE¼ Sec. 34 T 23 N, R 3 E	SE Cor. Sec. 34 T 23 N, R 3 E	N 37° W	1520	4
Eureka Middle	26A	NE¼ NE¼ Sec. 3 T 22 N, R 3 E	NE Cor. Sec. 3 T 22 N, R 3 E	Due W	1100	4
Eureka Pump	26B	NW¼ SE¼ Sec. 3 T 22 N, R 3 E	Center Sec. 3 T 22 N, R 3 E	Due E	350	4
Ripley Spring	27	SE¼ SE¼ Sec. 2 T 22 N, R 3 E	SE Cor. Sec. 2 T 22 N, R 3 E	N 34°30'W	1340	4
La Monte	28	NW¼ SE¼ Sec. 2 T 22 N, R 3 E	S¼ Cor. Sec. 2 T 22 N, R 3 E	N 5° 30'E	1480	4
Eureka Little	28A	SE¼ SE¼ Sec. 3 T 22 N, R 3 E	SE Cor. Sec. 3 T 22 N, R 3 E	N 85° W	300	4
Post Pump	28B	SW¼ SE¼ Sec. 3 T 22 N, R 3 E	S¼ Cor. Sec. 3 T 22 N, R 3 E	Due N	600	4
Belden	29	NE¼ NW¼ Sec. 2 T 22 N, R 3 E	NW Cor. Sec. 2 T 22 N, R 3 E	S 70°30'W	1920	4
Evers (Todd)	30	SW¼ SE¼ Sec. 9 T 22 N, R 3 E	SE Cor. Sec. 9 T 22 N, R 3 E	N 83°30'W	1940	4
Burke	31	SW¼ SE¼ Sec. 17 T 22 N, R 3 E	SE Cor. Sec. 17 T 22 N, R 3 E	N 88°30'W	2220	4
McLain	32	SE¼ NW¼ Sec. 20 T 22 N, R 3 E	NW Cor. Sec. 20 T 22 N, R 3 E	S 40°30'E	2300	4
McEnespy North	33	NE¼ SW¼ Sec. 20 T 22 N, R 3 E	SW Cor. Sec. 20 T 22 N, R 3 E	N 44° E	3450	4
McEnespy Main	34	NE¼ SE¼ Sec. 20 T 22 N, R 3 E	SW Cor. Sec. 20 T 22 N, R 3 E	N 44° E	3450	4
McEnespy Pipe	34A	NE¼ SW¼ Sec. 20 T 22 N, R 3 E	W¼ Cor. Sec. 20 T 22 N, R 3 E	S 60° E	1600	4
Mann Spring	35	NW¼ NE¼ Sec. 30 T 22 N, R 3 E	NE Cor. Sec. 30 T 22 N, R 3 E	S 56°30'W	2120	4
Lucas	36A	SE¼ NE¼ Sec. 21 T 26 N, R 4 E	E¼ Cor. Sec. 21 T 26 N, R 4 E	N 84° W	1000	6
Davis	36	SW¼ SW¼ Sec. 21 T 26 N, R 4 E	SW Cor. Sec. 21 T 26 N, R 4 E	N 63°30'E	1440	6
Thomas	37	SW¼ NW¼ Sec. 28 T 26 N, R 4 E	NW Cor. Sec. 28 T 26 N, R 4 E	S 13° E	1320	6

TABLE 2 (Cont'd.)

Name of Diversion System	Number of Diversion on Division of Water Resources Map	Approximate Location of Point of Diversion: Legal Sub-Division in which diversion occurs M.D.B.& M.	Reference corner for distance and bearing M.D.B.& M.	Bearing from reference corner	Distance in feet from reference corner	Map Sheet No.
Critchfield Pipe	38	SW¼ NW¼ Sec. 28 T 26 N, R 4 E	NW Cor. Sec. 28 T 26 N, R 4 E	S 13° E	1320	6
Welch Pipe	39	NW¼ SE¼ Sec. 29 T 26 N, R 4 E	E¼ Cor. Sec. 29 T 26 N, R 4 E	S 88° W	1900	6
Colgan Pipe	40	SE¼ NW¼ Sec. 29 T 26 N, R 4 E	Center Sec. 29 T 26 N, R 4 E	N 45° W	200	6
Kaufman Pipe	41	NW¼ SE¼ Sec. 29 T 26 N, R 4 E	SE Cor. Sec. 29 T 26 N, R 4 E	N 38°30' W	3160	6
Houghland Pipe	42	NW¼ SE¼ Sec. 29 T 26 N, R 4 E	SE Cor. Sec. 29 T 26 N, R 4 E	N 38°30' W	3160	6
Williamson Pipe	43	SW¼ NW¼ Sec. 28 T 26 N, R 4 E	NW Cor. Sec. 28 T 26 N, R 4 E	S 13° E	1320	6
Butte Meadows	44	NE¼ SE¼ Sec. 30 T 26 N, R 4 E	E¼ Cor. Sec. 30 T 26 N, R 4 E	S 64°30' W	650	6
Butte Creek Canal	45	SW¼ NE¼ Sec. 36 T 25 N, R 3 E	NE Cor. Sec. 36 T 25 N, R 3 E	S 52° W	3260	5
Butte Bell	45A	NE¼ SW¼ Sec. 10 T 24 N, R 3 E	SW Cor. Sec. 10 T 24 N, R 3 E	N 30° E	2000	5
McLain Sluice	45B	NW¼ NW¼ Sec. 15 T 24 N, R 3 E	NW Cor. Sec. 15 T 24 N, R 3 E	S 80° E	1200	5
Smith	46	NW¼ NW¼ Sec. 15 T 24 N, R 3 E	NW Cor. Sec. 15 T 24 N, R 3 E	S 59°30' E	1400	5
Centerville Canal	47	SW¼ NW¼ Sec. 10 T 23 N, R 3 E	W¼ Cor. Sec. 10 T 23 N, R 3 E	N 60° E	1140	4
Sorensen	48	SE¼ SW¼ Sec. 28 T 23 N, R 3 E	S¼ Cor. Sec. 28 T 23 N, R 3 E	N 16° W	580	4
Electric Mining	49	NW¼ SE¼ Sec. 8 T 22 N, R 3 E	E¼ Cor. Sec. 8 T 22 N, R 3 E	S 67° W	2480	4
Parrott	50	NE¼ NE¼ Sec. 4 T 21 N, R 2 E	NE Cor. Sec. 4 T 21 N, R 2 E	S 21° W	900	3
Hale	51	NE¼ NE¼ Sec. 4 T 21 N, R 2 E	NE Cor. Sec. 4 T 21 N, R 2 E	S 21° W	1020	3
Johnston Pump	52	NW¼ SE¼ Sec. 5 T 21 N, R 2 E	E¼ Cor. Sec. 5 T 21 N, R 2 E	S 82° W	1900	3
Plant Garden Pump	53	NW¼ SE¼ Sec. 5 T 21 N, R 2 E	SE Cor. Sec. 5 T 21 N, R 2 E	N 47° W	2900	3
Compton-Entler	54	NW¼ SE¼ Sec. 5 T 21 N, R 2 E	SE Cor. Sec. 5 T 21 N, R 2 E	N 52° W	2900	3
Marybill	55	NW¼ SE¼ Sec. 5 T 21 N, R 2 E	SE Cor. Sec. 5 T 21 N, R 2 E	N 52°30' W	2880	3

TABLE 2 (Cont'd.)

Name of Diversion System	Number of Diversion on Division of Water Resources Map	Approximate Location of Point of Diversion: Legal Sub-Division in which diversion occurs M.D.B.& M.	Reference corner for distance and bearing M.D.B.& M.	Bearing from reference corner	Distance in feet from reference corner	Map Sheet No.
Colony Upper	56	NW¼ SE¼ Sec. 5 T 21 N, R 2 E	SE Cor, Sec. 5 T 21 N, R 2 E	N 53° W	2700	3
Ollinger Pump	57	NE¼ SW¼ Sec. 8 T 21 N, R 2 E	W¼ Cor. Sec. 8 T 21 N, R 2 E	S 80°30'E	2500	3
Wakefield Pump	58	SE¼ NW¼ Sec. 17 T 21 N, R 2 E	W¼ Cor. Sec. 17 T 21 N, R 2 E	N 70°30'E	2400	3
Colony Lower	59	Lot 1, Durham State Land Settlement	NE Cor. Sec. 19 T 21 N, R 2 E	S 3° 30'E	2700	3
Merrifield Pump	59A	Lot 35A Durham State Land Settlement	SE Cor. Sec. 32 T 21 N, R 2 E	Due N	1400	3
Brandt Pump	59B	Lot 63B Durham State Land Settlement	NE Cor. Sec. 5 T 20 N, R 2 E	S 70° W	2740	3
Adams	60	Lot 35A, Durham State Land Settlement	NE Cor. Sec. 5 T 20 N, R 2 E	S 70° W	2740	3
Roy White Pump	60A	Between Northern Electric and Southern Pacific R.R. Crossings on Butte Creek				3
Gorrill	61	Projected Sec. 7: Rancho Esquon	NW Cor. Sec. 7 T 20 N, R 2 E	S 59° E	5120	3
White Pump	62	Projected Sec.24, Rancho Esquon	NE Cor. Sec. 24 T 20 N, R 1 E	S 52°30'W	2900	3
Western Canal and Goodspeed Pumps	63	Projected Sec.26: Rancho Aguas Frias	E¼ Cor. Sec. 26 T 20 N, R 1 E	N 62° W	3050	3
		SW¼ SW¼ Sec. 13 T 20 N, R 1 E	SE Cor. Sec. 13 T 20 N, R 1 E	N 60° W	1950	3
Adams Hamlin Slough	64	Projected Sec. 4: Rancho Esquon	NE Cor. Sec. 4 T 20 N, R 2 E	S 60° W	1780	3
Adams Hamlin Pump	65	Projected Sec. 8: Rancho Esquon	NE Cor. Sec. 8 T 20 N, R 2 E	S 40° W	1500	3
Gorrill Hamlin Slough	66	Projected Sec.17: Rancho Esquon	NW Cor. Sec. 17 T 20 N, R 2 E	S 5° E	840	3
Lomo Springs	67	NW¼ SW¼ Sec. 11 T 25 N, R 3 E	W¼ Cor. Sec. 11 T 25 N, R 3 E	S 30° E	900	5

TABLE 3

SUMMARY OF DIVERSION SYSTEMS DIVERTING
FROM BUTTE CREEK AND ITS TRIBUTARIES

(Listed alphabetically by streams)

Name of Owner	Diversion Number as per D.W.R. Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
		Butte Creek		
E. L. Adams and Lou R. Adams	60	Adams	3724.4	3724.4
	56	Colony Upper		
	64	Adams Hamlin Slough		
	65	Adams Hamlin Pump		
C. M. Archer	45	Butte Creek Canal and Upper Centerville Canal	11.9	11.9
Samuel A. Atkins and Barbara Ina Atkins	56	Colony Upper	30.0	64.0
	58	Wakefield Pump	34.0	
Ralph J. Baxter, C. W. Baxter, F. T. Woell and M. B. Woell	56	Colony Upper	12.3	12.3
Joe Bebich, Sam Bebich, George Setka, Anna Setka and Steve Vlatkovich	56	Colony Upper	96.7	96.7
L. C. Bonham	45	Butte Creek Canal and Upper Centerville Canal	8.3	8.3
George Brandt and Edna May Brandt	59B	Brandt Pump	50.0	50.0
California Lands, Inc.	--	Faulkner Pump (Proposed)	None	
Edwin A. Carlson and Gladys Carlson	56	Colony Upper	36.7	36.7
Bee P. Compton	54	Compton-Entler	228.4	228.4
Corporation of America	56	Colony Upper	20.0	20.0

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
		Butte Creed (Cont'd.)		
Dayton Mutual Water Company, Ltd	50	Parrott	650.3	1796.3
California Lands, Inc.			41.1	
Lloyd E. DeBock and O. B. DeBock			464.7	
Albert Estes			40.5	
J. A. Lewis			599.7	
W. C. Stevens				
The Diamond Match Company		Diamond Match (changes from time to time)	Domestic and Industrial	
Durham Mutual Water Company, Ltd.	56	Colony Upper	2201.6	
	59	Colony Lower	1364.6	3566.2
Electric Mining Company	49	Electric Mining Company Power Plant	Power	
Clarence S. Entler and Mary E. Roth	54	Compton-Entler	75.0	75.0
			3.4	3.4
Harold D. Estes	50	Parrott	66.2	66.2
The Federal Land Bank of Berkeley	57	Ollinger Pump	156.5	156.5
E. L. Franks and Ida May Franks	7	Stevenson Upper	103.4	103.4
	8	Stevenson Lower		
Ryland C. Goodspeed and Marian L. Goodspeed	63	Goodspeed Pumps	1035.0	1035.0
Isabelle A. Goodspeed and Estate of Vera E. Upphoff, deceased	63	Goodspeed Canal and Pumping Plant	1072.3	1072.3
Ralph C. Gorrill	61	Gorrill	2282.0	2282.0
	66	Gorrill Hamlin		
Frank Graham	45	Butte Creek Canal and Upper Centerville Canal	Domestic	

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
		Butte Creek (Cont'd.)		
Donald Hale and Alice Hilby Hale	51	Hale	92.9	92.9
D. A. Hook and W. S. Hook	56	Colony Upper	30.0	30.0
Elmo Jacks and Louise Jacks	56	Colony Upper	24.9	24.9
Thos. H. Jacobs and Dorothy L. Jacobs	45	Butte Creek Canal and Upper Centerville Canal	16.6	16.6
Johnston Rock Company	52	Johnston Pump	Industrial	
A. F. Lieurance and Lenore E. Lieurance	55	Marybill	527.1	527.1
J. H. Lucas, G. W. Lucas and C.F. Lucas	36A	Lucas Ditch	30.0	30.0
M. & T. Incorporated	50	Parrott	1997.5	1997.5
W. J. McGann and Elizabeth T. Cussick	36	Davis	1.5	1.5
George E. McLain	50	Parrott	6.0	6.0
B. A. Merrifield and Elizabeth C. Merrifield	59A	Merrifield Pump	50.5	50.5
Pacific Gas and Electric Company	45 47	Butte Creek Canal Centerville Canal	(2.0 (Power Power	2.0
Parrott Investment Company	50 56	Parrott Colony Upper	6159.2 211.0	6159.2 211.0
Ellenore K. Robbins and Samuel P. Robbins	45	Butte Creek Canal and Upper Centerville Canal	7.3	7.3
S. C. Sorensen	48	Sorenson	Mining	

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R. Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
		Butte Creek (Cont'd.)		
Carl Nelson Swartz and Esther M. Swartz	45	Butte Creek Canal and Upper Centerville Canal	15.0	15.0
Grace D. Taylor	37	Thomas	Domestic 5.0	5.0
Lester K. Thomasson, N. M. Thomasson, Beryl V. Thomasson, Zelma L. Stevens and Effie M. Bruce	50	Parrott	50.0	50.0
United States Department of Agriculture, Bureau of Plant Industry	53 50	Plant Garden Pump Parrott	154.5 Supplemental Supply	154.5
United States Department of Agriculture, Lassen National Forest	44	Butte Meadows Pipes	Domestic	
S. A Vandegrift	45	Butte Creek Canal and Upper Centerville Canal	Domestic	
Stephen Vernoga	56	Colony Upper	47.3	47.3
Varney F. Wakefield	58	Wakefield Pump	14.0	14.0
Eleanore Propfe Welch	39	Welch Pipe	Domestic	
Western Canal Company	63	Western Canal	22,129.0	22,129.0
L. E. Wheelock and Nellie Wheelock	56	Colony Upper	13.0	13.0
E. E. White	62	White Pumps	486.6	486.6
Roy White	60A	Roy White Pump	53.0	53.0
Herbert W. Whitten and Marjorie C. Whitten	60 56 64 65	Adams Colony Upper Adams Hamlin Slough Adams Hamlin Pump	665.3	665.3
Yuba Consolidated Gold Fields	55	Marybill	Mining	

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
	Tributary	to Butte Creek		
Anne Kennedy Anderson, Donald Mathewson and Winifred M. Kennedy	5A	Willow Creek Spring	8.0	8.0
Chas. Belden	29	Belden (Karl Creek)	Mining	
Ida B. Clark and Warren P. Clark (E. H. Statham)	31	Burke	6.0	6.0
Richard A. Colgan, Jr.	40	Colgan Pipe (Cold Spring)	1.0 Domestic and Commercial	1.0
Edwin B. Copeland	3	Mickey-Jones	4.0	4.0
Emma Crewe	12	Crewe	3.0	3.0
The Diamond Match Company	10, 10A, 10B, and 10C	Diamond Match (changes from time to time)	Domestic and Industrial	
Lovie L. Downs	17	Downs Spring	0.8	0.8
Estate of Ernest Duensing, deceased	14	Duensing	11.8	
	14A	Duensing Spring	4.0	15.8
Ella G. Evers	30	Evers	13.6	13.6
Frances B. Hamilton, A. C. Musselman, and George P. Morse	16A 18	Coutolenc Diversions (Hamilton-Musselman)	100.0	100.0
D. A. Hook, W. S. Hook and Lillian M. Hook	24A	Hook Dam	3.0	3.0
A. P. Kundert	25	Hupp Springs	1.0	1.0
J. H. Lucas	67	Lomo Springs	Domestic 2.0	2.0
J. H. Lucas, G. W. Lucas and C. F. Lucas	9	Lucas Springs	24.0	
	9A	McGann Springs	8.9	32.9

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
	Tributary to Butte Creek (Cont'd.)			
J. H. Lucas and Estate of William Johnson, deceased	5A	Willow Creek and Tributary Springs	40.0	
	5	Lucas-Jones Ditch	38.3	
	5B	Colby Creek and Tributary Springs	150.0	228.3
John J. Mahan and William J. Doyle	6	Cirby	21.3	21.3
Elsie Hume Mann	35	Mann Spring	1.0	1.0
H. D. March and Henrietta March	31	Burke	14.4	14.4
Fannie M. McEnespy	33	McEnespy North	7.6	
	34	McEnespy South	22.5	
	34A	McEnespy Pipe	Domestic	30.1
W. J. McGann and Elizabeth T. Cussick	9A	McGann Springs	66.8	66.8
George E. McLain and C. J. McLain	32	McLain	17.1	17.1
L. H. McLain and C. J. McLain	45A	Butte Bell		
	45B	McLain Sluice	Mining	
F. K. Mickey and J. H. Minderman	2	Mickey-Minderman Spring	Domestic	
	3	Mickey-Jones	14.0	
	4	Mickey-Minderman	15.4	29.4
Merritt Musselman and Florence V. Musselman	---	Musselman Springs	2.0	2.0
The Orleans Mining Development and Explorations (Geo. H. Mathews)	---	Mathews	Mining	
John L. Olson	11	Olson	Mining	
Paradise Irrigation District	22	Magalia and Princess Reservoirs		
	23	Nickerson	3229.4	3229.4

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
	Tributary to Butte Creek (Cont'd.)			
Roy L. Pearson, Orval L. Pearson, Eunice A. Cartwright and Mildred Laughlin	25	Hupp Springs	3.0	3.0
Jack L. Post	28	La Monte	Mining	
	28B	Pump (Proposed)		
Paul Ripley	27	Unnamed Spring	Power	
Joe A. Sagi	24	Sagi Pipes	11.6	11.6
H. W. Skillin and Alice Skillin	31	Burke	9.4	9.4
Almon E. Smith	26	Ethel Ditch	Mining	
Margaret A. Smith	46	Smith	Domestic and Mining	
Anna Spangler	--	Spangler	1.0	1.0
L. B. Stephenson	8A	Abietine Ditch		
	8B	Abietine Ditch		
	8C	Abietine Ditch	25.0	25.0
Carl Nelson Swartz and Esther M. Swartz	25A	Swartz (from Evers Spring)	Domestic	
United States Department of Agriculture, Lassen National Forest	1	Jonesville Blocks 1 & 2	Domestic	
	3	Mickey-Jones	10.2	
S. A Vandegrift	23A	Vandegrift Little Butte	Domestic	
	24B	Vandegrift Middle Butte	Domestic	
	24C	Vandegrift Spring	Domestic	
	24D	Vandegrift W. Br. Middle Butte	Domestic	
	24E	Michaels Spring	2.0	2.0
Vandegrift Trust	20, 20A	Richardson Diversions	87.0	
	21	Meadowbrook		87.0

TABLE 3 (Cont'd.)

Name of Owner	Diversion Number as per D.W.R.Map	Name of Diversion	Acreage Irrigated under Diversion	Total Acreage Irrigated on Ranch
	Tributary to Butte Creek (Cont'd.)			
W. H. Walker	16	Walker	6.5	6.5
David S. Webb and Mary D. Webb	13	Webb	Mining 2.0	2.0
F. E. Whitlock	25	Hupp Springs	10.0	10.0
Herbert W. Whitten and Marjorie C. Whitten, Olive M. Young, George Mead and Anna Mead, T. H. Polk and Lucia V. Polk	26A 26B 28A	Eureka Middle Ditch Eureka Pump Eureka Little Ditch	Mining	

TABLE 4

PRECIPITATION (Inches) - CHICO, BUTTE COUNTY
Elevation 189 Feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Seasonal
1930-31	0.13	1.55	0.61	4.50	2.92	0.83	0.85	0.89	0.97	0.00	T	0.42	13.67
1931-32	.41	1.93	8.09	2.21	1.31	.54	1.91	2.59	.01	.00	.00	.00	19.00
1932-33	.15	.72	4.26	4.21	1.00	2.41	.14	1.19	.00	.03	.00	.16	14.27
1933-34	1.42	.00	9.47	1.66	4.25	1.84	.84	.69	.45	.00	T	.04	20.66
1934-35	1.96	4.98	3.11	7.09	4.40	4.88	4.89	.62	.00	T	T	.31	32.24
1935-36	1.22	1.40	4.20	5.42	8.46	2.50	2.33	1.07	1.37	T	.00	.03	28.00
1936-37	.22	T	3.14	4.16	7.39	7.23	1.30	.06	1.44	.00	.00	.00	24.94
1937-38	3.00	7.35	5.50	5.87	9.36	6.34	3.51	.12	.02	T	.00	1.39	42.46
1938-39	3.15	.99	1.38	1.75	.93	2.84	.17	2.44	.09	.00	T	.91	14.65
69 Year Mean	1.04	2.91	4.17	4.87	4.30	3.17	1.49	1.01	.45	.03	.01	.59	24.04

TABLE 5

TEMPERATURE RECORDS AT CHICO

Month	Temperature in Degrees Farenheit, Chico - Elevation 189 Feet: Mean 69 Years	Mean Maximum 25 Years	Mean Minimum 25 Years	Maximum 69 Years	Minimum 69 Years
January	46.1	53.9	36.1	78	13
February	49.2	60.4	38.8	84	20
March	34.7	66.6	40.6	91	24
April	60.2	73.1	44.1	98	27
May	66.9	81.6	49.1	108	33
June	75.2	91.1	55.4	114	39
July	81.4	98.4	59.3	117	46
August	79.3	96.2	57.5	116	43
September	72.9	88.4	53.2	109	40
October	64.0	78.9	46.7	103	27
November	53.4	65.8	39.7	90	20
December	46.5	55.0	35.9	78	11
Annual	62.5	75.6	46.4	117	11

TABLE 6

DATES OF KILLING FROSTS

AT CHICO

Year	Last Frost before July 15	First Frost after July 15	Length of growing Season-Days
1906	March 15	November 6	236
1907	March 13	November 20	252
1908	March 31	November 27	241
1909	April 6	November 14	222
1910	February 17	November 19	275
1911	April 14	November 11	211
1912	March 22	November 21	244
1913	April 30	November 22	206
1914	February 4	November 15	284
1915	February 21	November 10	262
1916	March 24	November 7	228
1917	April 16	November 26	224
1918	April 4	November 6	216
1919	April 8	October 27	202
1920	April 21	November 1	194
1921	April 25	November 16	205
1922	April 18	October 29	194
1923	April 30	October 23	176
1924	April 25	November 10	199
1925	March 13	November 5	237
1926	February 23	December 12	292
1927	April 10	November 22	226
1928	April 4	November 17	227
1929	April 9	November 13	218
1930	March 1	November 14	258
1931	March 29	November 11	227
1932	April 6	November 3	211
1933	April 10	December 1	235
1934	January 24	December 2	312
1935	March 19	October 30	225
1936	April 5	November 2	211
1937	February 20	December 26	309
1938	March 31	November 6	220
1939	March 5	October 25	234
Average	March 26	November 14	233

TABLE 7

WATER CROP OF BUTTE CREEK AND ITS TRIBUTARIES
ABOVE THE COVERED BRIDGE COMPARED WITH
DEDUCED SNOW SURVEY RUNOFF FOR THE PERIOD APRIL 1 TO JULY 31

Year	Measured Water Content of Snow-Inches			Precipitation April to July	Seasonal Run-off Factor
	Humbug Summit	Mt. Stover	Average		
1931	0.5	0.5	0.5	2.7	3.2
1932	13.2	12.2	12.7	4.5	17.2
1933	12.5	15.1	13.8	1.3	15.1
1934	4.0	0.7	2.4	2.0	4.4
1935	19.0	21.8	20.4	5.5	25.9
1936	6.6	10.0	8.3	4.8	13.1
1937	20.7	22.4	21.5	2.8	24.3
1938	29.0	32.2	30.6	3.7	34.3
1939	3.8	6.2	5.0	2.7	7.7
9 Year Average	12.14	13.46	12.8	3.33	16.13
Deduced Normal	17.0	19.0	18.0	3.0	21.0

Year	Seasonal Run-off Factor		Natural Flow - Butte Creek at U.S.G.S. Station ac.ft.		Difference in per cent
	Inches	% of Mean	Measured	Computed*	
1931	3.2	15.2	24,000	-	-
1932	17.2	81.9	75,000	-	-
1933	15.1	71.9	55,000	-	-
1934	4.4	21.0	32,000	-	-
1935	25.9	123.	142,000	-	-
1936	13.1	62.3	70,000	66,100	-5
1937	24.3	116.	106,000	114,000	+7
1938	34.3	163.	165,000	157,000	-5
1939	7.7	36.7	42,000	43,000	+2
9 Year Average	16.13	76.8	79,000	-	-
Deduced Normal	21.0	100.	-	100,000	-

*Calculated by assuming 10,000 acre-feet flow not affected by snow crop.

TABLE 8

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK AT U. S. G. S. STATION ABOVE THE COVERED BRIDGE FOR THE PERIOD JUNE 1 TO SEPTEMBER 30, 1936

Day	June	July	August	September	
1	257	167	128	107	
2	232	162	126	104	
3	251	158	126	126	
4	260	136	126	132	
5	232	151	128	126	
6	284	145	128	124	
7	611	149	126	118	
8	364	145	124	113	
9	291	153	122	104	
10	235	156	124	109	
11	267	156	126	107	
12	264	138	128	107	
13	257	134	120	107	
14	251	132	124	111	
15	241	134	122	104	
16	232	136	120	107	
17	227	138	130	105	
18	221	140	116	114	
19	218	147	124	97	
20	213	147	126	93	
21	207	136	130	113	
22	192	142	111	105	
23	192	140	124	105	
24	182	134	130	96	
25	194	136	114	96	
26	189	132	124	92	
27	170	132	122	97	
28	170	134	130	97	
29	162	130	111	100	
30	187	126	113	104	
31	-	132	111	-	
Total Sec. Ft. Days	7253	4398	3814	3220	122 Day Period
Mean Second Feet	242	142	123	107	153
Maximum Second Feet	611	167	130	132	611
Minimum Second Feet	162	126	111	92	92
Total Acre Feet	14,400	8,720	7,560	6,390	37,100

TABLE 9

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK AT U. S. G. S. STATION ABOVE THE COVERED BRIDGE FOR THE PERIOD JUNE 1 TO SEPTEMBER 30, 1937.

Day	June	July	August	September	
1	453	195	138	96	
2	485	190	136	101	
3	449	205	133	99	
4	461	170	127	104	
5	457	164	127	99	
6	445	168	127	103	
7	388	161	125	110	
8	433	161	127	112	
9	441	164	123	98	
10	417	168	133	101	
11	402	166	119	104	
12	398	166	129	99	
13	398	161	114	91	
14	356	157	125	110	
15	363	155	114	103	
16	558	153	116	96	
17	381	148	108	94	
18	284	142	106	91	
19	287	153	104	89	
20	244	153	110	103	
21	231	146	103	92	
22	244	140	103	92	
23	226	140	108	96	
24	226	138	108	99	
25	221	140	103	103	
26	218	138	94	101	
27	228	138	101	99	
28	202	136	103	106	
29	208	136	94	84	
30	205	127	106	91	
31	-	138	101	-	
Total Second Feet Days	10,309	4,817	3,565	2,966	122 Day Period
Mean Second Feet	344	155	115	98.9	178
Maximum Second Feet	558	205	138	112	558
Minimum Second Feet	202	127	94	84	84
Total Acre-Feet	20,400	9,600	7,070	5,880	42,900

TABLE 10

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK AT U.S.G.S. STATION ABOVE THE COVERED BRIDGE FOR THE PERIOD JUNE 1 TO SEPTEMBER 30, 1938

Day	June	July	August	September	
1	685	282	193	127	
2	670	277	176	127	
3	680	274	163	127	
4	690	269	161	127	
5	652	282	163	127	
6	602	282	156	127	
7	624	256	142	117	
8	602	232	161	105	
9	580	225	163	105	
10	556	235	142	103	
11	532	235	139	103	
12	478	230	150	102	
13	413	235	156	103	
14	384	248	148	103	
15	356	222	172	102	
16	384	198	152	107	
17	416	212	146	121	
18	391	225	161	121	
19	368	210	154	117	
20	359	203	150	119	
21	356	200	139	117	
22	347	167	148	111	
23	335	181	148	111	
24	332	179	150	117	
25	320	191	152	119	
26	308	193	150	119	
27	302	181	150	129	
28	299	170	154	186	
29	314	174	150	176	
30	294	161	165	144	
31	-	165	142	-	
Total Second Feet Days	13,629	6,794	4,796	3,619	122 Day Period
Mean Second Feet	454	219	155	121	236
Maximum Second Feet	690	282	193	186	690
Minimum Second Feet	294	161	139	102	102
Total Acre-feet	27,000	13,500	9,510	7,180	57,200

TABLE 11

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK AT U.S.G.S. STATION ABOVE THE COVERED BRIDGE FOR THE PERIOD JUNE 1 TO SEPTEMBER 30, 1939

Day	June	July	August	September	
1	191	112	66	85	
2	182	104	71	97	
3	170	121	69	93	
4	172	116	71	82	
5	159	119	61	90	
6	163	112	66	93	
7	159	102	68	90	
8	159	112	60	85	
9	144	87	68	93	
10	157	117	71	78	
11	146	107	60	98	
12	144	81	66	92	
13	146	68	65	110	
14	130	76	78	97	
15	144	84	78	97	
16	152	82	81	107	
17	152	78	93	84	
18	138	75	95	105	
19	136	64	69	104	
20	130	72	76	92	
21	132	87	92	93	
22	119	66	87	94	
23	123	63	81	92	
24	130	71	84	85	
25	100	68	92	92	
26	128	69	84	98	
27	123	69	79	119	
28	107	71	95	109	
29	114	69	92	109	
30	117	69	85	84	
31	-	69	90	-	
Total Second Feet Days	4,267	2,660	2,393	2,847	122 Day Period
Mean Second Feet	142	85.8	77.2	94.9	99.7
Maximum Second Feet	191	121	95	119	191
Minimum Second Feet	100	63	60	78	60
Total Acre Feet	8,500	5,300	4,700	5,600	24,100

TABLE 12

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK BELOW WAKEFIELD PUMP-1939

Day	June	July	August	September
1		21.7	8.50	22.0
2		17.5	10.0	26.2
3		29.5	8.50	25.8
4		19.6	18.6	17.0
5		24.0	13.0	22.0
6		20.6	16.3	26.0
7		14.2	18.6	20.6
8		15.3	6.20	20.6
9		7.60	13.1	22.0
10		18.5	15.3	15.3
11	NO RECORD	15.3	8.60	20.6
12		6.20	10.0	17.6
13		2.40	16.3	20.8
14		12.2	26.2	14.0
15		22.0	24.0	14.0
16		30.3	24.0	17.4
17		28.2	26.2	10.8
18		24.0	29.2	12.0
19		13.0	16.3	12.0
20		14.0	16.3	6.20
21		22.0	22.8	7.60
22		14.0	21.7	13.1
23		11.0	20.6	10.0
24		13.2	20.6	5.60
25		15.2	24.0	8.20
26		16.3	20.6	18,5
27	16.6	16.3	16.2	37.0
28	6.60	16.3	24.0	32.6
29	14.0	16.3	22.8	31.6
30	15.0	16.3	18.5	21.6
31	-	15.3	20.7	-
Total Sec Feet Days	* 52.20	528.30	557.70	548.70
Mean Sec. Feet	* 13.0	17.0	18.0	18.3
Maximum Second Ft.	* 16.6	30.3	29.2	37.0
Minimum Second Ft.	* 6.60	2.40	6.20	5.60
Total Acre-Feet	*103.	1050.	1110.	1090.

96 Day Period
17.6
37.0
2.40
3350.

* 4-Day Period

TABLE 13

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF LITTLE BUTTE CREEK ABOVE MAGALIA RESERVOIR - 1939

Day	August	September	October	
1	No Record	1.14	3.44	
2		1.29	3.90	
3		.90	2.97	
4		.80	2.36	
5	1.37	.80		
6	1.52	.96		
7	1.70	.80		
8	1.70	.72		
9	1.70	.72		
10	1.29	.76		
11	1.02	.76		
12	1.14	.96		
13	1.22	1.29		
14	1.08	1.37		
15	1.14	1.29		
16	.96	1.14	NO RECORD	
17	.80	1.02		
18	.90	.96		
19	1.02	1.08		
20	.90	1.29		
21	.76	1.02		
22	.76	.84		
23	.76	.76		
24	.72	.84		
25	.72	1.22		
26	.72	2.17		
27	.72	1.43		
28	.90	1.98		
29	.90	2.27		
30	.90	2.97		
31	.96	-		
Total Second Feet Days	*28.28	35.55	**12.67	61 Day Period
Mean Second Feet	* 1.05	1.19	** 3.17	1.26
Maximum Second Feet	* 1.70	2.97	** 3.90	3.90
Minimum Second Feet	* .72	.72	** 2.36	.72
Total Acre-Feet	*56.1	70.5	** 25.1	152.

* 27 Day Period
** 4 Day Period

TABLE 14

ESTIMATED DAILY DISCHARGE IN CUBIC FEET
PER SECOND OF LITTLE BUTTE CREEK BELOW THE EVERS RANCH - 1939

Day	August	September
1	2.3	1.9
2	2.3	1.9
3	2.3	1.9
4	2.3	2.0
5	2.2	2.0
6	2.1	2.0
7	2.1	2.0
8	2.0	2.0
9	2.0	2.1
10	2.0	2.1
11	2.0	2.1
12	2.0	2.2
13	2.0	2.2
14	2.0	2.2
15	2.0	2.2
16	2.0	2.2
17	2.0	2.2
18	2.0	2.3
19	2.0	2.3
20	2.0	2.3
21	2.0	2.3
22	2.0	2.3
23	1.9	2.3
24	1.9	2.3
25	1.8	2.3
26	1.8	2.3
27	1.8	2.3
28	1.8	2.3
29	1.8	2.3
30	1.8	2.3
31	1.8	-
Total Second Feet Days	62.0	65.1
Mean Second Feet	2.0	2.1
Maximum Second Feet	2.3	2.3
Minimum Second Feet	1.8	1.9
Total Acre-Feet	123.	129.

61 Day Period
2.1
2.3
1.8
252.

TABLE 15

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF HENDRICKS CANAL AT B.W. 12 ABOVE JUNCTION WITH BUTTE CREEK CANAL - 1939

Day	June	July	August	September	
1		45.0	13.2	41.5	
2		45.6	13.2	40.8	
3		44.3	13.2	38.0	
4		45.0	13.2	38.0	
5		48.3	13.4	38.0	
6		49.1	13.4	38.0	
7		45.8	13.2	39.4	
8		42.9	12.8	38.0	
9		43.6	12.8	38.7	
10		30.0	13.6	38.0	
11	NO RECORD	23.4	13.6	39.4	
12		19.8	13.8	40.1	
13		18.4	14.0	43.6	
14		17.0	21.6	43.6	
15		16.3	35.2	44.3	
16		16.0	36.2	42.9	
17		15.6	33.2	36.8	
18		14.0	35.0	32.0	
19		13.2	33.2	30.5	
20		13.4	33.8	29.5	
21	41.5	14.4	31.0	31.0	
22	40.8	13.4	33.2	33.2	
23	39.4	13.2	32.0	41.5	
24	53.2	13.2	35.6	43.6	
25	51.6	13.2	35.0	45.0	
26	46.6	13.2	36.8	46.6	
27	43.6	13.4	37.4	45.8	
28	40.1	13.4	38.0	45.8	
29	40.1	13.2	38.0	45.0	
30	40.1	12.8	38.0	45.0	
31	-	12.8	40.8	-	
Total Sec. Feet Days	* 437.0	752.9	797.4	1193.6	102 Day Period
Mean Sec. Feet	* 43.7	24.3	25.7	39.8	31.2
Maximum Second Feet	* 53.2	49.1	40.8	46.6	53.2
Minimum Second Feet	* 39.4	12.8	12.8	29.5	12.8
Total Acre-Feet	* 867	1490	1580	2370	6310

* 10 Day Period

TABLE 16

DISCHARGE IN ACRE-FEET PER MONTH OF
HENDRICKS CANAL INTO DE SABLA RESERVOIR

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1930-31	615	0	861	2580	2890	4060	4520	3070	1490	738	0	1310	22,130
1931-32	1870	2280	2120	4130	3360	1060	30	412	3520	2430	1510	1620	24,340
1932-33	3440	1670	1290	799	0	615	2680	4920	4050	1170	2340	1790	24,800
1933-34	1480	952	1720	3200	3050	3440	1070	1910	2140	1350	1230	1310	22,900
1934-35	1780	2440	2830	1970	1220	4120	4170	4610	4050	2640	1970	2380	34,130
1935-36	2710	1960	1970	3570	3680	1410	4700	1410	4050	3260	3380	2380	34,480
1936-37	1840	1390	1500	440	0	1530	4220	5180	4940	3970	3010	2170	30,190
1937-38	2280	3310	4620	4880	3980	5090	4650	0	3460	4190	3440	1600	41,500

TABLE 17

DAILY DISCHARGE IN CUBIC FEET PER SECOND
OF BUTTE CREEK AT U.S.G.S. STATION DEDUCTING 95 PER CENT OF
REGULATED FOREIGN WATER INFLOW

1939

Day	June	July	August	September	
1		69.5	55.9	52.2	
2		68.8	55.5	52.1	
3		68.1	55.2	52.0	
4		67.8	55.0	52.2	
5		67.7	54.6	52.7	
6		67.7	54.4	53.1	
7		67.4	54.2	53.6	
8		67.1	53.9	53.8	
9		66.8	53.1	54.4	
10		66.6	52.5	55.1	
11	NO RECORD	65.9	52.0	55.8	
12		65.5	51.6	56.5	
13		65.2	51.3	57.2	
14		64.6	51.5	58.3	
15		64.1	52.1	59.4	
16		64.1	52.1	60.4	
17		63.2	52.0	61.2	
18		62.5	52.1	65.4	
19		60.7	52.0	67.7	
20		59.5	52.0	67.8	
21	86.6	58.2	51.9	63.5	
22	84.3	57.9	52.0	58.2	
23	82.1	57.6	51.9	54.7	
24	80.6	57.3	52.1	55.2	
25	78.3	57.1	52.1	54.3	
26	76.5	56.9	52.1	56.3	
27	74.9	56.8	52.2	58.3	
28	73.3	56.7	52.2	58.3	
29	71.8	56.6	52.2	58.2	
30	70.3	56.3	52.2	58.2	
31	-	56.0	52.2	-	
Total Sec. Feet Days	*778.7	1940.2	1636.1	1716.1	102 Day Period
Mean Second Feet	* 77.9	62.6	52.8	57.2	59.6
Maximum Second Feet	* 86.6	69.5	55.9	67.8	86.6
Minimum Second Feet	* 70.3	56.0	51.3	52.1	51.3
Total Acre Feet	*1540	3850	3240	3400	12000

* 10 Day Period

TABLE 18

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF PARROTT DITCH FROM BUTTE CREEK AT HEAD-1939

Day	June	July	August	September	October
1		55.1	26.9	41.5	66.0
2		54.7	29.6	45.0	79.2
3		56.2	28.4	43.2	76.6
4		56.2	28.4	41.9	76.6
5		56.2	26.0	43.6	
6	NO RECORD	55.5	26.6	46.1	
7		59.2	27.2	45.0	
8		64.9	26.0	40.5	
9		60.0	26.3	42.5	
10		66.9	25.4	39.6	
11		64.9	23.9	51.4	
12		56.5	24.8	49.9	
13		46.9	25.1	58.1	
14		37.5	26.0	56.2	
15		27.5	26.3	56.2	
16		18.6	29.0	63.8	
17		18.3	37.5	50.6	
18		21.5	39.0	60.0	NO RECORD
19		23.9	34.4	60.0	
20		25.4	35.3	60.0	
21		27.9	40.0	57.4	
22	69.4	25.1	40.0	52.5	
23	66.7	24.2	37.2	53.6	
24	66.7	25.4	36.6	52.9	
25	60.0	25.4	40.0	56.2	
26	70.5	25.4	39.0	60.0	
27	65.6	25.4	38.2	63.8	
28	61.9	25.4	44.3	66.4	
29	64.5	25.4	43.8	66.0	
30	59.2	25.4	42.5	53.6	
31	-	26.6	43.2	-	
Total Sec. Ft. Days	* 584.5	1206.6	1016.9	1577.5	**298.4
Mean Sec. Feet	* 64.9	38.9	32.8	52.6	** 74.6
Maximum Sec. Feet	* 70.5	64.9	44.3	66.4	** 79.2
Minimum Sec. Feet	* 59.2	18.3	23.9	39.6	** 66.0
Total Acre-feet	*1160.	2390.	2020.	3130.	**592.

105 Day Period	
44.6	
79.2	
18.3	
9290.	

* 9 Day Period
** 4 Day Period

TABLE 19

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF COLONY UPPER DITCH FROM BUTTE CREEK AT HEAD - 1939

Day	June	July	August	September	October	
1		21.1	20.2	19.9	15.6	
2		19.9	21.3	23.0	16.1	
3		22.6	19.9	22.6	15.9	
4		22.8	21.1	21.3	15.5	
5		23.4	19.9	18.5		
6		22.5	20.2	22.6		
7		19.3	21.6	20.9		
8		19.5	18.0	20.4		
9		14.3	19.6	21.6		
10		20.2	20.6	18.5		
11	NO RECORD	17.9	18.2	20.4		
12		12.8	19.7	20.2		
13		10.3	20.2	22.1		
14		16.2	19.9	20.2		
15		22.0	22.0	19.3		
16		23.8	23.0	22.0	NO RECORD	
17		23.8	23.5	18.0		
18		23.6	23.5	20.7		
19		21.0	19.1	19.7		
20		22.0	19.9	17.7		
21		24.2	22.2	18.5		
22		22.7	22.0	17.1		
23		20.6	21.6	19.4		
24	18.6	21.1	21.9	18.5		
25	22.2	21.3	21.6	17.7		
26	20.6	21.5	21.1	18.5		
27	21.0	21.8	20.8	15.8		
28	21.5	22.0	23.5	13.9		
29	19.4	21.8	22.4	15.5		
30	21.1	21.8	22.4	15.4		
31	-	21.8	20.7	-		
Total Sec. Ft. Days	* 144.4	639.6	651.6	580.5	** 63.1	103 Day Period
Mean Sec. Feet	* 20.6	20.6	21.0	19.4	** 15.8	20.2
Maximum Sec. Feet	* 22.2	24.9	23.5	23.0	** 16.1	24.9
Minimum Sec. Feet	* 18.6	10.3	18.0	13.9	** 15.5	10.3
Total Acre Feet	* 286.	1270.	1290.	1150.	**125.	4120

* 7 Day Period
** 4 Day Period

TABLE 20

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND
OF COMPTON-ENTLER DITCH FROM BUTTE CREEK NEAR HEAD 1939

Day	June	July	August	September	October	
1		6.08	3.40	3.80	1.40	
2		4.80	3.80	4.64	1.64	
3		4.56	3.24	4.47	1.56	
4		6.08	3.64	4.47	1.32	
5		6.72	3.24	2.68	-	
6		5.84	3.40	4.64		
7		4.05	3.80	3.88		
8		3.88	2.60	3.64		
9		1.56	3.56	4.05		
10		3.56	3.40	3.24		
11	NO RECORD	3.16	2.76	3.40		
12		2.20	3.32	3.96		
13		1.96	3.64	4.22		
14		2.60	3.32	3.64		
15		4.38	4.13	3.56		
16		5.04	4.30	4.30	NO RECORD	
17		5.04	4.80	2.76		
18		4.80	4.64	3.64		
19		3.40	2.84	3.64		
20		4.05	3.40	3.40		
21		4.64	4.30	3.16		
22		4.22	4.22	2.84		
23		3.64	4.22	3.40		
24		3.64	4.22	3.16		
25		3.72	4.22	2.60		
26		3.64	4.04	3.00		
27		3.80	3.64	3.00		
28	5.20	3.80	4.66	3.00		
29	4.64	3.80	3.80	3.16		
30	5.20	3.80	4.38	1.24		
31	-	3.80	4.05	-		
Total Sec. Feet Days	* 15.04	126.26	116.98	104.59	** 5.92	99-Day Period
Mean Sec. Feet	* 5.01	4.07	3.77	3.45	** 1.48	3.73
Maximum Sec. Feet	* 5.20	6.72	4.80	4.64	** 1.64	6.72
Minimum Sec. Feet	* 4.64	1.56	2.60	1.24	** 1.32	1.24
Total Acre Feet	* 29.8	250.	232.	207.	** 11.7	731

* 3 Day Period
** 4 Day Period

TABLE 21

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF MARYBILL DITCH FROM BUTTE CREEK AT HEAD-1939

Day	June	July	August	September	October	
1		7.30	4.71	4.56	3.08	
2		5.76	4.89	5.50	3.17	
3		5.47	4.53	5.32	3.17	
4		7.30	4.71	4.24	3.08	
5		8.06	4.49	4.49		
6		7.00	4.54	5.21		
7		4.86	4.89	5.32		
8		4.66	3.70	4.71		
9		1.87	4.67	5.10		
10		4.27	4.74	4.42		
11	NO RECORD	3.79	4.24	4.71		
12		2.64	4.67	4.78		
13		2.35	5.03	5.07		
14		3.10	4.67	4.67		
15		5.26	4.78	4.49		
16		6.05	4.96	5.10	NO RECORD	
17		6.05	5.39	4.02		
18		5.76	5.25	4.78		
19		4.08	4.06	4.60		
20		4.96	5.07	4.28		
21		5.52	4.78	4.24		
22		5.18	4.68	4.24		
23		4.71	5.07	4.42		
24		4.82	5.07	4.24		
25		4.85	5.07	4.06		
26		4.60	4.85	4.96		
27		4.96	4.37	4.96		
28	6.24	5.03	5.60	4.35		
29	5.58	4.96	4.56	3.70		
30	6.24	4.96	5.26	3.02		
31	-	4.89	4.86	-		
Total Sec. Feet Days	* 18.06	155.07	148.16	137.56	**12.50	99-Day Period
Mean Sec. Feet	* 6.02	5.00	4.80	4.59	** 3.12	4.76
Maximum Sec. Feet	* 6.24	8.06	5.60	5.50	** 3.17	8.06
Minimum Sec. Feet	* 5.58	1.87	3.70	3.02	** 3.08	1.87
Total Acre Feet	* 35.8	308.	294.	273.	**24.8	936.

* 3 Day Period
** 4 Day Period

TABLE 22

CONTINUOUS RECORD OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF NIMSHEW DITCH BELOW DE SABLA RESERVOIR-1939

Day	August	September	October	
1	1.94	1.94	2.02	
2	1.94	1.86	2.02	
3	1.86	1.86	2.02	
4	1.94	1.86	2.02	
5	1.94	1.86		
6	1.94	1.86		
7	1.94	1.86		
8	1.94	1.86		
9	1.94	1.86		
10	1.86	1.86		
11	1.77	1.86		
12	1.77	1.86		
13	1.77	1.86		
14	1.77	1.86		
15	1.77	1.77		
16	1.77	1.77	NO RECORD	
17	1.86	1.77		
18	1.94	1.77		
19	2.02	1.69		
20	2.02	1.69		
21	2.02	1.77		
22	2.02	1.77		
23	2.02	1.77		
24	2.02	1.77		
25	2.02	1.77		
26	2.02	1.77		
27	2.02	1.77		
28	1.94	1.86		
29	1.94	1.86		
30	1.94	1.86		
31	1.94	-		
Total Sec. Feet Days	59.60	54.55	*8.08	65 Day Period
Mean Sec. Feet	1.92	1.82	*2.02	1.88
Maximum Sec. Feet	2.02	1.94	*2.02	2.02
Minimum Sec. Feet	1.77	1.69	*2.02	1.69
Total Acre Feet	118.	108.	*16.0	242.

* 4 Day Period

TABLE 23

PHYSICAL DATA ON DE SABLA HYDROELECTRIC PLANT

BUILDING: - Corr. iron with steel frame. Size: - 109' x 50'

LOCATION: - NW 1/4, Sec. 10, T23N, R3E, M.D.B.& M. County - Butte
P.O. Address - De Sabla, Butte Co.

DATE IN COMMISSION: - Oct. 22nd, 1904.

SOURCE OF WATER SUPPLY: - Little Butte Creek, Butte Creek and W. Branch of N. Fk. of Feather River.

DRAINAGE AREA: - 108 sq. mi.

STORAGE: - Round Valley and Philbrook Res. 6160 ac. ft.

FOREBAY: - 264 ac. ft.

ELEVATION: (High Water in Forebay
(Center Line of Nozzles) #1 & #2 - 1197.43' STATIC HEAD 1531'
(For Impulse Wheels - 1199.92'
(Power House Floor - 1200.60'

PENSTOCK:

Number	Type of Pipe	Diameter Inches	Thickness Inches Min.	Thickness Inches Max.	Slope Length
2	Riv. & Flgd. Steel	30	3/32	3/4	6055'

PRIME MOVERS:

Number	Make & Type	Rated H.P. Each	Total H.P.	R.P.M.
2	Doble Impulse	3000		240
1	Allis Chalmers Impulse	7500		400
1	Doble Impulse	7500	21,000	400

EXCITERS:

Number	Make	D.C. Generator K.W.	V.	R.P.M.	Direct connected to
2	G.E.	45	60	720	75 H.P. G.E. induction motor and auxiliary water wheel
1	Stanley	125	60	600	175 H.P. Stanley induction motor

GENERATOR:

Number	Make & Type	Name Plate Rating	Plant Capacity	Bus Voltage
2	Stanley SKS. Inductors	2000 KW		
1	Stanley Revolving Field	4000 KW	14,000 KVA	2300
1	Stanley Revolving Field	5000 KW		

TRANSFORMERS:

Number	Make & Type	Capacity Each	Total Capacity	Full Winding H.T.	Full Winding L.T.	Conn. to line H.T.	Conn. to line L.T.
9	Stanley OIWCI	840	7560	38150	2300	60,000 YG	2300 D
3	Stanley OIWCI	1500	4500	38100	2300	60,000 YG	2300 D

LIGHTNING ARRESTER: Horn Gap

TABLE 24

PHYSICAL DATA ON CENTERVILLE HYDROELECTRIC PLANT

BUILDING - Concrete foundation, reinf. conc. walls, steel roof trusses: Corrugated iron roof. Size: - 110' x 32'

LOCATION: - SE 1/4, Sec. 5, T22N, R3E, M.D.B.& M. County - Butte
P.O. Address - Chico for Centerville, Butte Co.

DATE IN COMMISSION - May, 1900.

SOURCE OF WATER SUPPLY: - Butte Creek and Tail-water from De Sabla Plant

DRAINAGE AREA: - 129 sq. mi.

STORAGE: - Round Valley and Philbrook Res., 6160 ac. ft.

FOREBAY:- Concrete Structure, 26' x 37'

ELEVATION:

High Water in Forebay	1059.5'
Center Line of nozzles	482.21'
Tail Water for Turbine	469.63'
Power House Floor	484.38'

STATIC HEAD 577'
DRAFT HEAD ON TURBINE 13'

PENSTOCK:

Number	Type of Pipe	Diameter Inches	Thickness Inches Min	Thickness Inches Max	Slope Length
1	Riv. Steel	42 to 36	1/4	7/16	2558'
1	Riv. Steel	30	1/4	3/8	2558'

PRIME MOVERS:

Number	Make & Type	Rated H.P. Each	Total H.P.	R.P.M.
1	Allis Chalmers, Francis Turbine	9400		400
1	Pelton Impulse	1500	10,900	360

EXCITERS:

Number	D. C. Generator Make	KW	Volt	R.P.M.	Direct connected to
1	Stanley	60	60	720	90 H.P. Risdon Iron Wks. impulse wheel and a 85 HP Stanley motor

GENERATORS

Number	Make & Type	Name Plate Rating	Plant Capacity	Bus Voltage
1	Stanley Revolving Field	5,500 KW		
1	Stanley Inductor	900 KW	6,400 KVA	2300

TRANSFORMERS:

Number	Make & Type	Capacity Each	Total Capacity	Full Winding H.T.	Full Winding L.T.	Conn. to line H.T.	Conn. to line L.T.
3	West., O.I.S.C.I:	200	600	6600	2300	11,000 YG:	2300 D
3	StanleyO.I.W.C.I:	360	1080	36416	2300	60,000 YG:	2300 D
6	StanleyO.I.W.C.I:	840	5040	38150	2300	60,000 YG:	2300 D

LIGHTNING ARRESTER: None

TABLE 25

GROSS USE OF WATER FOR ACREAGE IRRIGATED FROM BUTTE CREEK AND ITS TRIBUTARIES DURING THE PERIOD OF INVESTIGATION IN 1939

Diversion Number	Diversion Ditch	Property Owner	Irrigation Period 1939	Total Ac. Ft. Diverted	Acreage Irrigated 1939	Gross Use for Period: Ac.Ft. per Acre	Gross Use for Period: Acres per c.f.s.
45	Nimshew (Butte Creek Canal)	C. M. Archer L. C. Bonham Dorothy L. Jacobs Ellenore K. Robbins C. N. Swartz S. A Vandegrift	8/1 to 9/4	242	44.5	5.44	24
31 32	Burke) McLain)	Ida B. Clark H. D. March H. J. & Alice Skillin Geo. E.& C. J. McLain	8/1 to 9/30	252	45.9	5.49	22
50 51	Parrott) Hale)	Geo. E. McLain California Lands, Inc. Albert Estes W. C. Stevens M. & T. Inc. Parrott Investment Co. Donald Hale	6/22 to 10/4	9290	5000.0	1.86	112
53	U.S.Plant Garden Pump	U.S. Department of Agriculture, Plant Introduction Station	6/1 to 9/30	83.8	100.0	.84	289
54	Compton-Entler	Bee Compton C. S. Entler M. E. Roth	6/28 to 10/4	731	85.1	8.59	23
55	Marybill	A. F. Lieurance	6/28 to 10/4	936	300.0	3.12	63
56 59	Colony Upper) Colony Lower)	Parrott Investment Co. Samuel A. Atkins E. A. & G. Carlson Hook Bros. Elmo Jacks Durham Mutual Water Co., Ltd. C. M. Baxter, et al Steve Vernoga Corporation of America	7/1 to 9/30	6177	2873.8	2.15	85
Totals and Means			99 days	17711.8	8449.3	2.10	93

TABLE 26

APPLICATIONS BEFORE THE DIVISION OF WATER RESOURCES
TO APPROPRIATE FROM BUTTE CREEK AND TRIBUTARIES - ABOVE THE WESTERN DAM

Application No.	Date Filed	Permit No.	License No.	Name of Applicant	Source	Location of Point of Diversion M.D.B.& M.	Amount c.f.s.	Purpose	Acreage	No. of Diversion on D.W.R. Map
92	7/31/15	2326	—	Paradise Irrigation District	Little Butte Creek	NW¼NW¼ Sec.18,T23N,R4E	4148*	Agric.	11,000	—
476	9/21/16	271	—	Paradise Irrigation District	Little Butte Creek	SE¼SE¼ Sec.25,T23N,R3E	9500*	Agric.	11,000	22
1656	2/5/20	794	880	E.L.Adams & Fed.Ld.Bk.Berkeley	Hamlin Slough	NW¼NE¼ Sec.4,T20N,R2E	12.00	Agric.	2,768	64
2576	10/6/21	1722	1027	E.L.Adams - H.W.Whitten and Fed. Ld. Bk. of Berkeley	Butte Creek	NE¼SW¼ Sec.5,T20N,R2E	6.00	Agric.	1,616.9	60
2777	3/6/22	1779	—	R. C. Gorrill	Butte Creek Hamlin Slough	SE¼NE¼ Sec.7,T20N,R2E NW¼NW¼ Sec.17,T20N,R2E	15.00	Agric.	2,629	61
2805	3/24/22	1872	1028	E.L.Adams & H.W. Whitten	Butte Creek	NE¼SW¼ Sec.5,T20N,R2E	14.00	Agric.	1,214.9	60
2909	6/27/22	2027	1029	E.L.Adams - H.W. Whitten and Fed.Ld.Bk.of Berkeley	Butte Creek Hamlin Slough	NW¼SE¼ Sec.5,T21N,R2E NE¼NW¼ Sec.21,T21N,R2E NW¼NE¼ Sec.4,T20N,R2E	20.00	Agric.	1,531.3	56,64
3191	12/22/22	1369	684	Charles Belden	Karl Gulch	NE¼NW¼ Sec.2,T22N,R3E	1.50	Mining	—	29
3250	2/3/23	1437	606	Almon E. Smith	Middle Butte Creek	SE¼SE¼ Sec.34,T23N,R3E	2.00	Mining	—	26
4663	6/30/25	2447	1030	E.L.Adams	Hamlin Slough	NE¼NE¼ Sec.8,T20N,R2E	13.80	Agric.	1,214.9	65
4664	6/30/25	2448	—	R.C. Gorrill	Hamlin Slough	NW¼NW¼ Sec.17,T20N,R2E	22.50	Agric.	2,629.0	66
4665	6/30/25	2449	—	R.C. Gorrill	Butte Creek	SE¼NE¼ Sec.7,T20N,R2E	15.00	Agric.	2,629.0	61
4989	4/7/26	2706	837	Margaret A. Smith	West Br.Butte Cr.	NW¼NW¼ Sec.15,T24N,R3E	2.53	Power	—	46
5109	7/17/26	3210	—	M & T Inc.	Regulated flow from Philbrook Reservoir	NE¼NE¼ Sec.4,T21N,R2E	20.00	Agric.	3,620.0	50
5110	7/17/26	3211	—	Parrott Investment Co.	Regulated from from Philbrook Reservoir	NE¼NE¼ Sec.4,T21N,R2E		Agric.	17427.0	50
8006	7/3/34	4662	—	Jack L. Post	Little Butte Creek	NW¼SE¼ Sec.2,T22N,R3E	13.00	Mining	—	28
8187	12/1/34	4699	—	Parrott Investment Co.	Regulated flow from Philbrook Reservoir	NE¼NE¼ Sec.4,T21N,R2E	100.00	Agric.	17427.0	50
8188	12/1/34	4700	—	M & T Inc.	Regulated flow from Philbrook Reservoir	NE¼NE¼ Sec.4,T21N,R2E	—	Agric.	3,620.0	50
8559	2/19/36	4743	—	Parrott Investment Co.	Butte Creek	NE¼NE¼ Sec.4,T21N,R2E	50.00	Agric.	17427.0	50
8565	2/27/36	4744	—	M & T Inc.	Butte Creek	NE¼NE¼ Sec.4,T21N,R2E	50.00	Agric.	3,620.0	50
8646	4/25/36	4788	—	Paul Ripley	Unnamed Spring	SE¼SE¼ Sec.2,T22N,R3E	0.20	Power	—	27
8724	7/2/36	4848	—	John L. Olson	Unnamed Stream	SW¼SE¼ Sec.23,T24N,R3E	2.50	Mining	—	11
9316	6/10/38	5284	—	S. C. Sorensen	Butte Creek	SE¼SW¼ Sec.28,T23N,R3E	1.80	Mining	—	48
9504	2/10/39	—	—	Durham Mutual Wtr.Co.Ltd.	Butte Creek	NW¼SW¼ Sec.20,T21N,R2E	20.00	Agric.	1,364.0	59
9735	9/22/39	—	—	M & T Inc.	Butte Creek	NE¼NE¼ Sec.4,T21N,R2E	50.00	Agric.	3,620.0	50
9736	9/22/39	—	—	Parrott Investment Co.	Butte Creek	NE¼NE¼ Sec.4,T21N,R2E	50.00	Agric.	17427.0	50

*Acre-feet

TABLE 27

CONTINUOUS RECORD OF FLUCTUATIONS IN DAILY DISCHARGE IN CUBIC FEET PER SECOND OF BUTTE CREEK AT THE COVERED BRIDGE - 1939

Day	June			July			August			September		
	Max.	Min.	Fluctuation	Max.	Min.	Fluctuation	Max.	Min.	Fluctuation	Max.	Min.	Fluctuation
1				140	87	53	72	61	11	126	57	69
2				132	84	48	98	59	39	125	33	92
3				314	82	232	114	58	56	123	68	55
4				140	85	55	157	59	98	121	60	61
5				142	89	53	105	59	46	123	60	63
6				142	82	60	107	61	46	125	64	61
7				136	44	92	116	25	91	123	61	62
8				146	73	73	76	59	17	121	61	60
9				134	75	59	112	59	53	125	61	64
10				245	76	169	109	60	49	110	59	51
11				136	78	58	64	57	7	134	59	75
12				130	69	61	82	58	24	125	65	60
13				81	29	52	102	59	43	132	81	51
14				201	34	167	117	59	58	128	63	65
15				227	81	146	110	58	52	128	64	64
16				87	78	9	119	61	58	225	38	187
17				84	72	12	113	65	48	98	63	35
18				84	31	53	159	60	99	126	84	42
19				71	61	10	121	21	100	161	64	97
20				76	65	11	121	59	62	125	64	61
21	144	110	34	119	72	47	123	61	62	126	55	71
22	142	50	92	81	63	18	126	63	63	285	25	260
23	138	68	70	66	61	5	119	64	55	125	61	64
24	256	92	164	92	63	29	119	63	56	126	64	62
25	142	85	57	73	65	8	125	64	61	132	60	72
26	140	107	33	72	68	4	109	64	45	138	32	106
27	140	97	43	76	66	10	119	63	56	314	76	238
28	138	46	92	76	68	8	159	64	95	138	71	67
29	138	82	56	73	68	5	126	66	69	132	73	59
30	138	85	53	72	68	4	130	64	66	132	66	66
31				85	61	24	125	60	65			
Total	1516	822	694	3733	2098	1635	3554	1813	1741	4252	1812	2440
Average	151	82	69	124	70	54	118	60	58	141	60	81

APPENDIX I

Description of Diversion Systems

DESCRIPTION OF DIVERSION SYSTEMS

The diversion systems from Butte Creek and its tributaries taken consecutively from 1 to 67, are described below. A summary of the data contained under these descriptions has hereinbefore been submitted in Table 3. In the table the names of the various owners are listed alphabetically by streams. The respective diversion numbers, names of diversion systems and the total acreage irrigated thereunder have been set forth in Table 3.

Diversion 1 is that of the Jonesville Blocks from springs tributary to Jones Creek near the headwaters of Butte Creek. The springs are in Butte County and are located as hereinbefore described in Table 2.

The diversion consists of a number of pipe lines to supply domestic water for summer homesites in the Jonesville Blocks subdivision of the Lassen National Forest of the United States Department of Agriculture.

Diversion 2 is that of the Mickey-Minderman Spring tributary to Jones Creek which is tributary to Butte Creek. The spring is in Butte County and is located as hereinbefore described in Table 2.

Water is diverted from the spring through a 2-inch pipeline about one-fourth of a mile in length. It serves domestic water for summer homesites on the lands of Frank K. Mickey and J. H. Minderman.

The calculated capacity of the pipe line is 0.07 cubic foot per second.

Diversion 3 is that of the Mickey Ditch from the south side of Jones Creek, a tributary of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A gravel and board dam one foot high and ten feet long is used to divert the water. The conduit consists of an earth ditch about three-fourths of a mile in length. The main conduit terminates in the $SE\frac{1}{4}$ $NE\frac{1}{4}$ Sec. 13,

T. 26 N., R. 4 E., M.D.B.& M.

The diversion is used for domestic and stockwatering purposes and for the irrigation of 18.0 acres of meadow pasture. The following table summarizes the uses of water under Diversion 3.

Owner	Maximum Acreage Normally Irrigated
Frank K. Mickey and J. H. Minderman	3.8
United States Dept. of Agriculture (Lassen National Forest)	*10.2
United States Dept. of Agriculture (Lassen National Forest)	Domestic
Edwin B. Copeland	4.0

*Land is leased by Frank K. Mickey.

The ditch has a cross-section of about two feet wide at the top, one and one-half feet wide at the bottom and a depth of one foot. The estimated capacity is 1.00 cubic foot per second.

No record was kept of the use from the diversion during the 1939 season.

Diversion 4 is that of the Mickey-Minderman Ditch from the south side of Jones Creek, a tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A gravel and board dam one foot high and ten feet long is used to divert the water. The conduit consists of an earth ditch about 1000 feet in length. The main conduit terminates in the NW¼ NE¼ Sec. 13, T. 26 N., R. 4 E., M.D.B.& M.

An area of 15.4 acres of meadow pasture is irrigated from the ditch on the lands of Frank K. Mickey and J. H. Minderman.

The ditch is about one foot wide at the top, three-fourths foot wide on the bottom and one-half foot deep. The estimated capacity is 0.50 cubic foot per second

Diversion 5 is that of the Lucas-Jones Ditch from the north side of Jones Creek, a tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A log and rock dam about one foot high and ten feet long is used to divert water. The conduit consists of an earth ditch which follows along the north edge of the meadow for about 1400 feet. The end of the main conduit is in the NE¼ NE¼ Sec. 14, T. 26 N., R. 4 E., M.D.B.& M. An area of 38.3 acres of meadow pasture is irrigated from the ditch on the lands of J. H. Lucas and Estate of William Johnson, deceased. The ditch is about one and one-half feet wide at the top, one foot wide on the bottom and one foot deep.

The maximum capacity of the conduit is estimated to be 0.80 cubic foot per second and the normal irrigating head to be 0.50 cubic foot per second.

Diversion 5A is that of the Willow Creek System, consisting of a ditch from Willow Creek Spring and subirrigation from the channel of Willow Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A sod dam one foot high and six feet long is used to divert water from the spring channel immediately below the spring. The ditch conveys water southerly about one-fourth of a mile around the westerly edge of a meadow embracing 48.0 acres. The irrigated land is owned as follows:

	Acres
J. H. Lucas and Estate of William Johnson, deceased	40.0
Anne Kennedy Anderson, Donald Mathewson and Winifred M. Kennedy	8.0
Total	48.0

The Lucas and Johnson land also receives some benefit from sub-irrigation from the channel of Willow Creek.

The ditch has a cross-section of one and one-half feet on top, one foot on the bottom and depth of one foot. The grade is five feet per 1000 feet. The carrying capacity is about 1.00 cubic foot per second. A 1-inch pipe line with a capacity of about 0.05 cubic foot per second leads from the spring to the Kennedy home to supply domestic water.

Diversion 5B is that of the Colby Creek System, consisting of spreading dams in the Colby Creek meadows to facilitate the spreading of water and subirrigation from springs raising thereon and from Colby Creek. The diversion system is in Tehama County at various points along Colby Creek between the North line of T. 26 N., R. 4 E., M.D.B.& M. and the Tehama-Butte County line. The capacity of the system is about 2.00 cubic feet per second.

The water is utilized in the irrigation and subirrigation of Colby Creek meadows, embracing 150.0 acres, owned by J. H. Lucas and Estate of William Johnson, deceased. The irrigated land all lies in Tehama County.

Diversion 6 embraces those of the Cirby Ditches from both the north and south sides of Cirby Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A gravel and brush dam six inches high and about six feet long is used to divert the water from the shallow creek channel. Two earth ditches convey water around the outer fringes of the irrigated land. The ditches are each about 1000 feet in length to their respective termini in the SW¼ NW¼ Sec. 26, T. 26 N., R. 5 E., M.D.B.& M.

An area of 21.3 acres of meadow pasture is irrigated from the ditches on the lands of John J. Mahan and William J. Doyle.

The ditches are each about one and one-half feet wide at the top, one foot wide on the bottom and one-half foot deep. The capacity of each is

about 0.50 cubic foot per second.

Diversions 7 and 8 are the Stevenson Upper Ditch and Stevenson Lower Ditch which divert from the south side of Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

Two loose rock and gravel dams, each about six inches high and eight feet long are used to divert the water from the shallow creek channel into two earth ditches which convey water onto the irrigated land. The ditch from Diversion 7 is about 600 feet long and terminates in the NE¼ NE¼ Sec. 28, T. 26 N., R. 5 E., M.D.B.& M. The ditch from Diversion 8 is about 1700 feet long and terminates in the NW¼ NE¼ Sec. 28, T. 26 N., R. 5 E., M.D.B.& M.

An area of 103.4 acres of meadow pasture on the lands of E. L. Franks is irrigated and subirrigated either from the ditches or from the creek channels traversing the meadow.

The ditch from Diversion 7 is about one foot wide at the top, three-fourths foot wide on the bottom and six inches deep, and has an estimated capacity of 0.50 cubic foot per second. The ditch from Diversion 8 is about three and one-half feet wide at the top, two feet wide on the bottom and one foot deep and has an estimated capacity of 2.00 cubic feet per second.

Diversions 8A, 8B, and 8C are those of the Abietine Ditches, respectively, from Butte Creek, Salt Lick Springs and Willow Creek. These diversions are in Butte County immediately northwest of Butte Creek House and are located as hereinbefore described in Table 2.

The ditches are each two feet wide on top, one foot on the bottom and two-thirds of a foot deep. The grades of the ditches are five feet per 1000 feet. The combined capacity is about 1.50 cubic feet per second. These diversions were formerly used for domestic and industrial purposes in

the manufacture of abietine. The water is now used for domestic and stock-watering purposes and for the irrigation of 25.0 acres of meadow on the lands of L. B. Stephenson.

Diversion 9 is that of the Lucas Springs, tributary to Butte Creek. The springs are in Butte County and are located as hereinbefore described in Table 2.

The water with the use of deflecting dams spreads naturally from springs located along the higher side of the meadow. 24.0 acres of meadow pasture on the lands of J. H. Lucas, G. W. Lucas and C. F. Lucas are irrigated or subirrigated thereunder with the use of spreading dams.

Diversion 9A is that of the McGann Springs, tributary to Butte Creek. The springs are in Butte County and are located along the northeast boundary of the McGann Meadow as hereinbefore described in Table 2.

The water with some assistance from spreading dams spreads naturally from the springs located along the higher side of the meadow irrigating and subirrigating 57.9 acres of meadow pasture on the lands of W. J. McGann and Elizabeth T. Cussick, and 8.9 acres of the lands of J. H. Lucas, G. W. Lucas and C. F. Lucas

Diversions 10, 10A and 10B and 10C are those of the Diamond Match Company, respectively from Malloy Creek and springs tributary to Bull Creek, Clear Creek and West Branch of Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

A low dam is maintained in Malloy Creek to divert water into the conduit which consists of an earth ditch about one-half mile in length to its terminus in the SE¼ NW¼ Sec. 28, T. 26 N., R. 4 E., M.D.B.& M. The ditch is one and one-half feet wide on top, one foot wide on the bottom, six inches deep and has a grade of five feet per 1000 feet.

Two-inch pipe lines lead from the above mentioned springs to their respective termini in the NW¼ NE¼ of Sec. 17, T. 25 N., R. 4 E., M.D.B.& M., SW¼ NE¼ of Section 5, T. 24 N., R. 4 E., M.D.B.& M., and NE¼ SE¼ of Section 34, T. 25 N., R. 3 E., M.D.B.& M. The combined capacity was estimated to be 2.00 cubic feet per second. The site of operations changes from time to time but the consumption of water from the Butte Creek stream system remains fairly constant at about 2.00 cubic feet per second. The water is utilized for industrial and domestic purposes.

Diversion 11 is that hereinbefore described under Application 8724 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 12 is that of the Crewe Ditch from the north side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and earth dam about one and one-half feet high and twelve feet long is used to divert water into an open earth ditch which branches about 600 feet from the diversion point. The westerly branch crosses under the road in a small culvert and falls rapidly into Butte Creek Canyon to operate a small electric power plant owned by Emma Crewe. The plant supplies electric power for use at her house. The easterly branch of the ditch is about one-fourth mile in length and is used to irrigate approximately 3.0 acre of orchard and garden around the home of Emma Crewe. The main ditch terminates in the SW¼ NE¼ Sec. 24, T. 24 N., R. 3 E., M.D.B.& M.

The ditch is about three feet wide at the top, one foot wide on the bottom and one foot deep. The capacity is about 3.00 cubic feet per second.

Diversion 13 is that of the Webb Ditch from the west side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A rock and earth dam one and one-half feet high and twelve feet long is used to divert water into an earth ditch about one-fourth mile in length to the terminal of the main conduit in the SW¼ SW¼ Sec. 24, T. 24 N., R. 3 E., M.D.B.& M. An area of 2.0 acres of lawn and garden is irrigated from the ditch on the lands of David S. Webb and Mary D. Webb.

The ditch is about one foot wide at the top, eight inches wide on the bottom and six inches deep. The capacity is estimated to be 0.50 cubic foot per second.

Diversion 14 is that of the Duensing Ditch from the east side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

An earth and rock dam one and one-half feet high and twelve feet long is used to divert water. The earth ditch is about 2000 feet in length to its terminus in the NE¼ SW¼ Sec. 36, T. 24 N., R. 3 E., M.D.B.& M.

An area of 11.8 acres of meadow pasture is irrigated from the ditch on the lands of the Estate of Ernest Duensing, deceased.

The ditch is about four feet wide at the top, three feet wide on the bottom and one and one-half feet deep. The capacity is estimated to be 3.00 cubic feet per second.

Diversion 14A is that of the Duensing Spring Ditch from the south side of Duensing Spring Channel, tributary to Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The gravel and sod dam in the spring channel is one foot high and five feet long. The water is diverted immediately below the county road culvert into a 6 inch by 12 inch flume 16 feet long over the Toadtown Ditch. The earth ditch then follows along the east bank of the Toadtown Ditch along the west boundary of the meadow for one-fourth of a mile. An area of 4.0

acres of meadow on lands of the Estate of Ernest Duensing, deceased, is served on the west side of Little Butte Creek.

The entire flow of Duensing Spring of about 0.15 cubic foot per second is diverted in the conduit. This diversion also supplies stock-water in addition to the meadow irrigation.

Diversion 15 is that of the Toadtown Ditch from the west side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A wooden dam about three feet high and sixteen feet long is used to divert water into the conduit which consists of an earth ditch about six hundred feet in length to its junction with the Hendricks Canal in the SW¼ NW¼ Sec. 36, T. 24 N., R. 3 E., M.D.B.& M.

The ditch is owned and operated by the Pacific Gas and Electric Company. The diversion is used to supplement the flow in the Hendricks Canal whenever water is available in Little Butte Creek.

The ditch is about five feet wide on the top, four feet wide on the bottom and two feet deep and has an estimated capacity of twenty cubic feet per second.

The Pacific Gas and Electric Company has a second dam in Little Butte Creek about one-fourth mile below the above described diversion, which can be used as an alternate diversion. The lower dam apparently has not been used for several years.

The name Toadtown Ditch is also applied to the main Hendricks Canal from the above mentioned junction to where it joins the Butte Creek Canal.

Diversion 16 is that of the Walker Ditch from Maple Springs, a tributary of Rielly Ravine. The diversion is in Butte County and is located

as hereinbefore described in Table 2.

No dam or ditch system for direct diversion was maintained in 1939. An area of 6.5 acres of meadow pasture and orchard is irrigated and sub-irrigated from the diversion on the lands of W. H. Walker.

Diversion 17 is that of the Downs Spring, a tributary of Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A collecting box has been constructed at the spring from which the water is conveyed through 400 feet of one-inch pipe to its place of use in the NE¼ SE¼ Sec. 1, T. 23 N., R. 3 E., M.D.B.& M.

The water is used for domestic purposes and for the irrigation of 0.8 acre of garden on the lands of Lovie L. Downs.

The pipe line diverts the entire flow of the spring.

Diversions 16A and 18 are those of the Hamilton (Musselman) Ditch from the south side of Rilley Ravine, Musselman Creek and springs tributary to Musselman Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

A rock and earth dam three feet high and twelve feet long is used to divert water from Rielly Ravine into an earth ditch approximately three-fourths mile in length to its place of use in the S½ SE¼ Sec. 1, and the E½ NE¼ of Section 12, T. 23 N., R. 3 E., M.D.B.& M.

The diversions are used in conjunction with a ditch from Little West Branch of Feather, which is spilled into Rielly Ravine above Diversion 16A for the irrigation of 100.0 acres of orchard and general crops on the lands of Frances B. Hamilton, A. C. Musselman and George P. Morse.

The ditch is about four feet wide at the top, three feet wide on the bottom and one and one-half feet deep. The capacity is about 4.00 cubic

feet per second. The principal source of water supply is the Feather River stream system.

Diversion 19 is that of the Mosquito Ditch from Mosquito Creek, a tributary of Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The land is largely subirrigated by seepage from the creek and from the surrounding higher ground. No dam or ditch system for direct diversion was maintained in 1939.

An area of 2.9 acres of meadow pasture and garden is irrigated from the ditch on the lands of the Diamond Match Company.

Diversions 20 and 20A are those of the Richardson Diversions from sides of Little Butte Creek, tributary to Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

A board and gravel dam approximately three feet high and twenty feet long is used to divert water into the conduit leading from Diversion 20, which consists of an earth ditch about one-half mile in length to where it divides into two laterals which skirt the east and west boundaries of the meadow. Diversion 20A embraces three dams in Little Butte Creek within the meadow area on Meadowbrook Ranch, which redivert drainage back to the creek from the irrigation under Diversions 20 and 21. Diversions 20 and 20A are used in conjunction with Diversion 21 to irrigate 87.0 acres of meadow pasture on Meadowbrook Ranch owned by Vandegrift Trust.

The ditch from Diversion 20 is about two feet wide on the top, one and one-half feet wide on the bottom and ten inches deep. The capacity is approximately 2.00 cubic feet per second. The dams at Diversion 20A redivert during the irrigation season the entire flow at each of the three points.

Diversion 21 is that of the Meadowbrook Ditch from the west side of Meadow Brook, tributary to Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A board and gravel dam approximately one and one-half feet high and twelve feet long is used to divert water into the conduit which consists of an earth ditch about 1600 feet in length to its place of use on the west side of Little Butte Creek in Meadowbrook Ranch.

Diversion 21 is used in conjunction with Diversions 20 and 20A to irrigate 87.0 acres of meadow pasture on Meadowbrook Ranch owned by Vandegrift Trust.

The ditch is about one and one-half feet wide at the top, one foot wide on the bottom and eight inches deep. The capacity is approximately 1.00 cubic foot per second.

Diversion 22 has hereinbefore been described under Application 476 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 23 is that of the Nickerson Ditch from east side of Little Butte Creek, tirbutary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The diversion dam has washed out and has not been replaced. The conduit consists of an earth ditch about two and one-third miles in length and a short flume section where it enters the irrigated land in the $NE\frac{1}{4}$ $NE\frac{1}{4}$ Sec. 11, T. 22 N., R. 3 E., M.D.B.& M.

The ditch is approximately five feet wide at the top, four feet wide on the bottom and has a flowage depth of two feet. The capacity is approximately 18 cubic feet per second. The flume section has approximately the same section and capacity as the ditch.

The Paradise Irrigation District purchased the ditch and water right from the Oro Electric Corporation prior to the construction of the Magalia Reservoir. Since construction of the reservoir the entire flow of Little Butte Creek, except when the reservoir was full, has been captured in the reservoir and diverted therefrom through the Paradise Ditch hereinbefore described under Application 476.

Diversions 23A and 24C are those of the Vandegrift diversions, respectively from Little Butte Creek and Vandegrift Spring, tributary to Little Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

The waters of Little Butte Creek are utilized in the channel for domestic and stock-watering purposes in the W½ NE¼ of Section 36, T. 23 N., R. 3 E., M.D.B.& M. at Diversion 23A.

The waters flowing from Vandegrift Spring in the course of the old Cherokee Canal are utilized for domestic and stock-watering purposes in the W½ of Section 25, T. 23 N., R. 3 E., M.D.B.& M.

The above described lands and diversions are owned by S. A Vandegrift.

Diversion 24 is that of the Sagi Pipes from three Sagi Springs, tributary to Middle Butte Creek. The diversions are in Butte County and are located on the lands of Joe A. Sagi as hereinbefore described in Table 2.

An area of 11.6 acres of garden, orchard and meadow pasture is irrigated and subirrigated from the diversions on the lands of Joe A. Sagi. Domestic water is also supplied to several homesites on the Sagi Ranch.

Diversion 24A is that of the Hook Dam on Middle Butte Creek, tributary to Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A dam five feet high and twelve feet long in Middle Butte Creek forms a pond which is used for recreational purposes. D. A. Hook, W. S. Hook and Lillian M. Hook, the owners, plan to construct a ditch leading from the dam for about one-eighth of a mile to irrigate 3.0 acres in the $N\frac{1}{2}$ $N\frac{1}{2}$ $NE\frac{1}{4}$ $NE\frac{1}{4}$ of Section 23, T. 23 N., R. 3 E., M.D.B.& M. The ditch will also be used to operate a ram to elevate water for domestic purposes to the summer home on the property.

Diversions 24B and 24D are those of the Vandegrift Middle Butte and Vandegrift West Branch diversions, respectively from Middle Butte Creek and West Branch of Middle Butte Creek. These diversions consist of domestic and stock-watering uses directly from the stream channels throughout the course thereof in Sections 23 and 26, T. 23 N., R. 3 E., M.D.B.& M. Both of these sections, with the exception of the $N\frac{1}{2}$ $N\frac{1}{2}$ $NE\frac{1}{4}$ $NE\frac{1}{4}$ and $SE\frac{1}{4}$ $SW\frac{1}{4}$ of said Section 23, are owned by S. A Vandegrift.

Diversion 24E is that of the Michaels Ditch from Michaels Spring, tributary to Middle Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

Diversion is made by means of an earth dam at the spring one foot high and five feet long. The conduit consists of an earth ditch three-eighths of a mile in length with a cross-section of one foot top, two-thirds foot bottom, and one-half foot deep on a grade of five feet per 1000 feet. This diversion serves 2.0 acres of garden and orchard and domestic water on the lands of S. A Vandegrift in the $S\frac{1}{2}$ $NW\frac{1}{4}$ of Section 35, T. 23 N., R. 3 E., M.D.B.& M. J. J. Cooper has an interest in this 80-acre tract as a contract purchaser.

Diversion 25 is that of the Hupp Canal from a series of springs tributary to Middle Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. The springs collected in the

Hupp Ditch are known as Sawmill, Cantwell, Goat Ranch and Doolittle Springs.

The conduit consists of 20,574 feet of earth ditch and 426 feet of lumber flume. The main conduit discharges into Helltown Ravine in the SE¼ NW¼ Sec. 34, T. 23 N., R. 3 E., M.D.B.& M. where the water comingles with that from the Upper Centerville Canal before passing down the ravine to the Lower Centerville Canal. The springs supply the entire summer flow available for diversion which is all utilized on the three ranches listed below.

The ditch has in the past been used by the Pacific Gas and Electric Company to divert water from Middle Butte Creek during the winter and early spring or to re-divert water spilled in Middle Butte Creek from DeSabla Reservoir for use in the Centerville power plant. Since the construction of the Lower Centerville Canal to its present capacity, the ditch has been used only for irrigation purposes on 14.0 acres of orchard and truck on lands owned as follows:

Owner	Normal Maximum Irrigated Acreage
Orval L. Pearson, Roy L. Pearson, Eunice A. Cartwright and Mildred Laughlin	3.0
A. P. Kundert	1.0
F. E. Whitlock	10.0
Total	14.0

The canal is six and one-half feet wide at the top, two and one-half to three and one-half feet wide on the bottom and two and one-half feet deep. The grade is irregular with slopes of 1.627 and 1.913 feet per thousand predominating. The original capacity has been computed as about twenty-five cubic feet per second, but due to lack of upkeep it has a present capacity of about eight cubic feet per second.

Diversion 25A is that from Evers Spring, which rises on the land of Carl Nelson Swartz and Esther M. Swartz and is tributary to Butte Creek. The spring is in Butte County and is located as hereinbefore described in Table 2.

Water is utilized at present directly from the spring for domestic and stock-watering purposes by Carl Nelson Swartz and Esther M. Swartz. They propose to install a ram to elevate water to their home for domestic use and for the irrigation of about 2.0 acres.

Diversion 26 has hereinbefore been described under Application 3250 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversions 26A, 26B and 28A are those respectively of the Eureka Middle Ditch, Eureka Pump and Eureka Little Ditch. The Eureka Middle Ditch and Eureka Pump divert from Middle Butte Creek and the Eureka Little Ditch from Little Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

Each of the ditches has a cross-section of three and one-half feet top, one and one-half feet bottom, one foot deep and grade of five feet per 1000 feet. The ditch leading from Diversion 26A is about three-fourths of a mile in length and that from Diversion 28A about one-half mile in length. Both diversion dams have been washed out and have not been replaced. Mr. Whitten stated that the ditches had not been used for several years.

A three-inch centrifugal pump operated by a gas engine is used to elevate water about 200 feet at Diversion 26B to the present site of mining operations at the Mugford Mines. The capacity of the pumping plant of 0.50 cubic foot per second is utilized for milling and flotation.

The ditches were formerly used for sluicing. The capacity of each ditch was ample to provide a sluice-head of 3.00 cubic feet per second at

the Mugford Mines now owned jointly by Herbert W. Whitten and Marjorie C. Whitten (5/8 interest), Olive M. Young (1/8 interest), George Mead and Anna Mead (1/8 interest), and T. H. Polk and Lucia V. Polk (1/8 interest).

Diversion 27 has hereinbefore been described under Application 8646 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 28 has hereinbefore been described under Application 8006 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 28B is that pumping plant proposed by Jack L. Post on Little Butte Creek immediately below the confluence of Middle Butte Creek. A four-inch pump with a capacity of 0.90 cubic foot per second is to be used in conjunction with Diversion 28 for mining purposes at the same mines hereinbefore described under Application 8006 filed under the provisions of the Water Commission Act.

Diversion 29 has hereinbefore been described under Application 3191 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 30 is that of the Evers Ditch from the west side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and gravel dam about one foot high and twenty feet long is used to divert the water. The conduit consists of an earth ditch approximately 7300 feet in length ot its principal place of use in the SW¼ SE¼ Sec. 17, T. 22 N., R. 3 E., M.D.B.& M.

A total area of 13.6 acres of meadow pasture is irrigated from the ditch on the lands of Ella G. Evers. The ditch also serves stock-water to the barnyard.

The ditch is about two feet wide at the top, one and one-half feet wide at the bottom and one foot deep at the limiting section. The capacity is about two cubic feet per second.

Diversion 31 is that of the Burke Ditch from the east side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and gravel dam about one foot high and fifteen feet long is used to divert water into a conduit consisting of an earth ditch about 11,500 feet in length. Short sections of sixteen-inch concrete pipe are used where the conduit crosses several rocky gulches and Honey Run Creek. The conveyance loss in the ditch is heavy, amounting to almost half of the quantity of water diverted.

A total area of 29.8 acres of alfalfa and meadow pasture is irrigated from the ditch on the following ranches:

Owner	Normal Maximum Irrigated Acreage
H. W. Skillin and A. Skillin	9.4
H. D. March	14.4
Warren P. Clark and Ida B. Clark (E. H. Statham)	6.0
Total	29.8

The ditch is about three feet wide at the top, two feet wide on the bottom and one foot deep. The capacity is limited to about 3.50 cubic feet per second by the concrete pipe sections.

The water supply of Little Butte Creek above the Burke Ditch from August 1 to September 30, 1939, has been tabulated in Table 14. All of the water during the period was diverted through Diversions 31 and 32.

Diversion 32 is that of the McLain Ditch from the west side of Little Butte Creek, tributary to Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and dirt dam one and one-half feet high and fifteen feet long is used to divert water into the conduit which consists of an earth ditch approximately 11,000 feet in length. The conveyance loss in the ditch in August and September, 1939, was more than fifty per cent of the amount of water diverted.

A total area of 17.1 acres of meadow pasture is irrigated from the ditch on the Geo. E. and C. J. McLain Ranch.

The ditch is about two feet wide at the top, one foot wide on the bottom and eight inches deep. The capacity is about two cubic feet per second.

The water supply of Little Butte Creek above the Burke Ditch from August 1 to September 30, 1939 is tabulated in Table 14. All of the water during the period was diverted by Diversions 31 and 32.

Diversions 33 and 34 are those of the McEnespy North Ditch and McEnespy South Ditch, respectively, from both sides of Honey Run Creek, a tributary of Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and earth dam is used to divert water into two earth ditches which divert from opposite sides of the creek. The north and the south ditches are respectively about 900 feet and 2200 feet in length to their respective places of use in the SE¼ NW¼ Sec. 20, T. 22 N., R. 3 E., M.D.B.& M. and the NW¼ SW¼ Sec. 20, T. 22 N., R. 3 E., M.D.B.& M.

During the dry weather season of 1939 all of the water in Honey Run Creek was diverted through the McEnespy South Ditch.

The McEnespy North Ditch was not used during the period of the investigation.

A total area of 30.1 acres of meadow pasture and uncropped ground is irrigated from the ditches on the lands of Fannie M. McEnespy as set forth

in Table 3. This area also receives supplemental water from McEnespy Spring as hereinafter described under Diversion 34A.

The north ditch is about one and one-fourth feet wide at the top, one foot wide on the bottom and six inches deep. It has a capacity of about 0.50 cubic foot per second. The south ditch is about one and one-half feet wide at the top, one foot wide on the bottom and eight inches deep. It has a capacity of about one cubic foot per second.

Diversion 34A is that of the McEnespy Pipe from McEnespy Spring, tributary to Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A one-inch pipe line heads in a box at the spring and conveys water about 900 feet to the McEnespy home for domestic uses including garden and yard irrigation. The capacity of the pipe is 0.02 cubic foot per second.

The total flow of McEnespy Spring is about 0.10 cubic foot per second. The flow not diverted through the McEnespy Pipe is collected in the McEnespy South Ditch leading from Diversion 34, and is utilized as a supplemental irrigation supply on 16.0 acres served under that ditch. This system is owned by Fannie M. McEnespy.

Diversion 35 is that of the Mann Spring tributary to Little Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A short pipe line is used to divert water from the spring to the place of use.

An area of 1.0 acre of garden is irrigated from the spring on the lands of Elsie Hume Mann.

Diversion 36A is that of the Lucas Ditch from the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The loose rock diversion dam is one and one-half feet high and twenty-four feet long. The earth ditch has a cross-section of two feet top, one foot bottom, one foot deep and a grade of five feet per 1000 feet. The capacity is about 1.50 cubic feet per second.

The water is utilized for the irrigation of 30.0 acres of meadow on the lands owned jointly by J. H. Lucas, G. W. Lucas and C. F. Lucas.

Diversion 36 is that of the Davis Ditch from the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A loose rock and gravel wing dam about one foot high and six feet long is used to divert the water. The conduit consists of an earth ditch about 2700 feet long to its terminus in the NE¼ NE¼ Sec. 29, T. 26 N., R. 4 E., M.D.B.& M.

An area of 1.5 acres of truck garden is irrigated from the ditch on the lands of W. J. McGann, and Elizabeth T. Cussick. Domestic water is also supplied to several summer homes.

Extra water is diverted in the Davis Ditch to provide a fresh supply of domestic water. The surplus water drains into the Thomas Ditch, which returns any unconsumed water to Butte Creek.

The ditch is about one and one-fourth feet wide at the top, one foot wide on the bottom and has a capacity of about one cubic foot per second.

Diversion 37 is that of the Thomas Ditch from the north side of Butte Creek in Butte County and is located as hereinbefore described in Table 2. The places of use are in Butte and Tehama Counties.

A loose rock and gravel dam about one foot high and six feet long is used as a wing dam to divert the water. The conduit consists of an earth

ditch about one mile in length, terminating in the NW¼ SW¼ of Section 29, T. 26 N., R. 4 E., M.D.B.& M.

The conduit is used to supply domestic water and to irrigate 5.0 acres of meadow on the Grace Taylor property.

The ditch is about one and one-half feet wide at the top, one foot wide on the bottom and one foot deep. The capacity is about one cubic foot per second.

The ditch is customarily kept running near capacity to insure palatable domestic water. The excess over the domestic and irrigation requirements is returned to the creek.

Diversion 38 is that of the Critchfield Pipe from a well on the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. The water is used for domestic purposes at the summer home site of O. N. Critchfield.

Diversion 39 is that of the Welch Pipe diverting from the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. Water is diverted by means of a hand force pump and also by means of a 1-inch plunger type water power pump operated by a water power wheel. The capacity of the system is 0.02 cubic foot per second. A 1-inch pipe line 115 feet long conveys water for domestic use to the summer home of Eleanor Propfe Welch in Lots 26, 32 and 33 of the 1st subdivision of the Davis Tract.

Diversion 40 is that of the Colgan Pipe from Cold Spring on the south side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. A rock and concrete dam three feet high and four feet long diverts water into a three-inch pipe leading 1500 feet to one acre in Lot 10, Butte Meadows Subdivision No. 1, owned by Richard A. Colgan, Jr. The capacity of the pipe line is 0.14 cubic foot per

second. The water is used for domestic and industrial purposes.

Diversion 41 is that of the Kaufman Pipe from a well on the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. The water is used for domestic purposes on the C. C. Kaufman summer homesite.

Diversion 42 is that of the Houghland Pipe from a well on the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2. The water is used for domestic purposes on the Anna Houghland summer homesite.

Diversion 43 is that of the Williamson Pipe from a well on the north side of Butte Creek. The diversion is in Butte County and is located as herinbefore described in Table 2. The water is used on the J. G. Williamson summer homesite for domestic purposes.

Diversion 44 are those of the Butte Meadows pipes from both sides of Butte Creek. The diversion is in Tehama County and is located as hereinbefore described in Table 2. A 1½-inch Deming Oil Rite pressure system operated by a 1½ H.P. Stover gas engine is used to divert the water.

The conduits consist of three pipe lines which supply water to the Butte Meadows Guard Station, camp ground, and Butte Meadows Tract of homesites on the lands of the United States Department of Agriculture, Lassen National Forest. Two of the pipes are 1½ inches in diameter and the other is a 1¼ inch pipe.

Diversion 45 is that of the Butte Creek Canal from the east side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A concrete arch dam 45 feet high and 110 feet long at its crest is used to divert water into the conduit which consists of 53,361 feet of open ditch, 7,646 feet of flume and 485 feet of tunnel. The canal conveys the

water out of the canyon onto the ridge, where it intercepts the flow of the Hendricks Canal which conveys water from the West Branch of Feather River watershed. The commingled flows discharge into DeSabla Reservoir in the SE¼ SW¼ Sec. 2, T. 23 N., R. 3 E., M.D.B.& M.

The DeSabla Reservoir which originally had a capacity of 264 acre-feet is used as a forebay for the DeSabla power plant. The present capacity of the reservoir is about 60 acre-feet. Two 43-inch outlets from the reservoir are divided to feed three 30-inch penstocks, only two of which have been installed, to the DeSabla power plant and one 16-inch outlet into the Upper Centerville Canal sometimes known as the Nimshew Ditch. The water conveyed through the penstocks is discharged into Butte Creek at the power house in the SW¼ NW¼ Sec. 10, T. 23 N., R. 3 E., M.D.B.& M.

The upper Centerville Canal is fed by the 16-inch outlet, the incompleted 30-inch penstock outlet and the spillway from the DeSabla Reservoir. The canal consists of 25,582 feet of open ditch, 118 feet of wooden flume and 2200 feet of natural watercourse to its terminus in the SE¼ NW¼ Sec. 34, T. 23 N., R. 3 E., M.D.B.& M., where it spills into Hell-town Ravine which conveys the water into the Centerville Canal about one and one-half miles above the forebay of the Centerville power plant.

The conduit system from Diversion 45 is used primarily for the generation of electric energy by the Pacific Gas and Electric Company. Water is also used for the irrigation of 64.5 acres of orchard, alfalfa, truck and pasture and for domestic and industrial purposes through the Upper Center-ville Canal in the Nimshew vicinity as follows:

Owner	Normal Maximum Irrigated Acreage
Pacific Gas & Electric Company	2.0
S. A Vandegrift	Domestic and Industrial
Frank Graham	Domestic
Dorothy L. Jacobs and Thos. H. Jacobs	16.6
Carl N. Swartz and Esther M. Swartz	15.0
Ellenore K. Robbins and Samuel P. Robbins	7.3
L. C. Bonham	8.3
C. M. Archer	11.9
E. H. Ferguson	3.4
Total	64.5

The amount of water discharged from DeSabla Reservoir into the Upper Centerville Canal during the period of the investigation has been tabulated in Table 22.

The Butte Creek Canal has the following dimensions: top width of fifteen feet, bottom width of seven feet and depth of five feet for the earth canal to its junction with the Hendricks Canal. The cross-section has a top width of twenty-one feet, bottom width of fifteen feet and depth of seven feet from the junction to DeSabla Reservoir. The upper portion of the canal has a grade varying from 1.85 to 2.67 feet per thousand. The maximum capacity is about 95 cubic feet per second. The portion below the junction has a grade of 2.76 feet per thousand and a maximum capacity of 190 cubic feet per second. The sections of flume and tunnel are of sufficient size to carry the same amount of water as the open canal.

The Upper Centerville Canal has a top width varying from eight and one-half to nine feet, a bottom width varying from four to five and three-tenths feet and a depth of four feet. The capacity is about fifty-five cubic

feet per second.

The physical data on the DeSabla and Centerville power plants have hereinbefore been set forth in Tables 23 and 24.

Diversions 45A and 45B are those of the Butte Bell and McLain Sluice Ditches from the west side of the West Branch of Butte Creek. These diversions are in Butte County and are located as hereinbefore described in Table 2.

Each of the diversion dams are about forty feet long and one and one-half feet high. The dams are constructed of logs and gravel.

The Butte Bell Ditch has a cross-section of two feet on top, one and one-half feet on the bottom and two feet deep. It is an earth ditch about one-half mile in length constructed on a grade of five feet per 1000 feet.

The McLain Sluice is a one foot by one foot box flume 300 feet long on a grade of five feet per 1000 feet. This diversion is used to supplement the amounts of water diverted in the Butte Bell Ditch to insure a sluice head of about 1.00 cubic foot per second.

These diversions are owned by L. H. McLain and C. J. McLain. The water is used to operate a Pelton wheel and for sluicing at the McLain Mine on the lands of the Whiteside Estate.

Diversion 46 has hereinbefore been described under Application 4989 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 47 is that of the Centerville Canal from the east side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A concrete dam ninety feet long and twelve feet high of the ogee type is used to divert the water. The conduit consists of 35,105 feet of

open ditch, 8,652 feet of flume and 129 feet of tunnel. The canal follows the canyon wall throughout its length and intercepts the flow of the several ravines along its course. The flow of Helltown Ravine (Upper Centerville Canal) is intercepted about one and one-half miles above the terminus of the canal in the NE¼ SW¼ Sec. 4, T. 22 N., R. 3 E., M.D.B.& M. A small forebay or headworks is located at the end of the canal from which two 24-inch penstocks and one 42-inch penstock lead to the Centerville power house in the NE¼ SE¼ Sec. 5, T. 22 N., R. 3 E., M.D.B.& M. The water is discharged directly into Butte Creek below the power house.

The canal is owned by the Pacific Gas and Electric Company and operated for the generation of hydro-electric energy.

The open ditch portion of the canal has a top width of from twelve to thirteen and one-half feet, a bottom width of from nine to eleven feet and a depth of four feet eight inches. The flume section has a width of seven feet six inches and a depth of five feet. The flume section is not continuous. The grade varies from 2.63 feet per thousand in the first 1900 feet of conduit to 1.28 feet per thousand in the remainder. The capacity of the canal is 175 cubic feet per second above Helltown Ravine and 192 cubic feet per second below.

The physical data on the Centerville hydro-electric plant has hereinbefore been set forth in Table 24.

Diversion 48 has hereinbefore been described under Application 9316 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 49 is that of the Electric Mining Co. Ditch from the west side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A timber and rock crib dam has been constructed one hundred and ninety feet in over-all length and five feet in height to the 80-foot crest opening. The crest is closed with five and one-half feet of flashboards to divert water into the conduit which consists of about 200 feet of tunnel, 1600 feet of earth and rock canal and 500 feet of wooden flume. The dam and conduit are owned by Electric Mining Company. The company plans to install a low head turbine at the lower terminal of the flume for the generation of electric energy. The water is used and returned to the creek in the $S\frac{1}{2}$ $SE\frac{1}{4}$ $SW\frac{1}{4}$ Sec. 8, T. 22 N., R. 3 E., M.D.B.& M.

The tunnel section at the head of the conduit is composed of two tunnels at the entrance which combine into one tunnel about six feet in cross section below the slide headgates. The canal is six feet wide on the bottom with one-half to one side slopes and a water depth of four feet. The flume is about ten feet wide with four feet sides. The average slope through the canal is about one and one-half feet per thousand. The capacity of the conduit is limited to about 360 cubic feet per second by the size of the entrance tunnels.

Diversion 50 is that of the Parrott Ditch from the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A concrete base diversion dam one hundred twenty-eight feet long with sixteen drop type steel A frames to support flashboards is used for diversion. The conduit consists of about 4600 feet of earth ditch to where it is tapped by Crouch Lateral. Any water not taken by the Crouch Lateral is spilled into Edgar Slough. The concrete headworks is equipped with two 3 by 4 feet wooden slide gates operated by screw wheels. The ditch is approximately nine feet wide at the top, eight feet wide on the bottom and four feet deep. It has a grade of two feet per thousand feet. The capacity

of the ditch is limited to about 120 cubic feet per second by a culvert above the fishwheel.

The division between the Crouch Lateral and Edgar Slough is regulated by two openings in a concrete bulkhead which has been constructed in the ditch on the bank of Edgar Slough. The openings are regulated by slide gates operated by screw wheels.

The Crouch Lateral, now owned by Dayton Mutual Water Company, Ltd., follows a westerly and southwesterly course for about six and one-half miles to its terminus in the NE¼ NW¼ Sec. 15, T. 21 N., R. 1 E., M.D.B.& M. on the land formerly belonging to Ben E. Crouch, but now owned as follows:

Owner	Normal Maximum Irrigated Acreage
Geo. E. McLain	6.0
California Lands, Inc. (North tract)	168.5
Albert Estes	464.7
California Lands, Inc. (South tract)	481.8
W. C. Stevens	599.7
J. A. Lewis	40.5
Lloyd DeBock and O. B. DeBock	41.1
Total	1802.3

All of the above lands, except that of George E. McLain, are included under Dayton Mutual Water Company, Ltd.

Edgar Slough, a natural water course, is utilized to convey water from the division point above described in a westerly and southwesterly direction for about eight and one-fourth miles where the water is again divided. One-half of the flow is conducted from the lower division northerly for use on the lands of M. & T. Incorporated, and the remainder flows south for about two and one-fourth miles for use on the Llano Seco Rancho lands of

Parrott Investment Company. The main channel terminates in the SW¼ Sec. 18, T. 21 N., R. 1 E., M.D.B.& M. on the Rancho De Farwell.

The following acreages are irrigated from the Edgar Slough continuation of the Parrott Ditch:

Owner	Normal Maximum Irrigated Acreage
M. & T. Incorporated	1997.5
Parrott Investment Company	6159.2
Total	8156.7

The amount of water diverted through the Parrott Ditch during the period of investigation in 1939 has been tabulated in Table 18. A small portion of the water diverted was used on the Donald Hale and Alice Hale property as described hereinafter under Diversion 51.

The rights of the Parrott Ditch to foreign water and to Butte Creek water are hereinafter set forth in Appendix II and as hereinbefore described under Applications 5110, 8187, 8188, 8559, 8565, 9735 and 9736 filed under the provisions of the Water Commission Act.

Diversion 51 is that of the Hale Ditch from the north side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A temporary gravel wing dam is constructed from time to time as required immediately below the Parrott Dam to divert water into the conduit which consists of about 4600 feet of earth ditch to its terminus in the NW¼ NW¼ Sec. 4, T. 21 N., R. 2 E., M.D.B.& M. below the Edgar Slough crossing. The head of the ditch was destroyed in the 1938 flood and has not yet been repaired. A temporary tap on the Parrott Ditch above the head of the Crouch Lateral provided the only water used in the Hale Ditch in 1939.

An area of 92.9 acres of alfalfa, truck and ladino clover is

irrigated from the ditch on the lands of Donald Hale and Alice Hilby Hale.

The ditch is about three and one-half feet wide at the top, two feet wide on the bottom and one foot deep. It has an estimated capacity of five cubic feet per second.

Diversion 52 is that of the Johnston Pump from the west side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The water is diverted by two pumps, a six inch centrifugal which is used intermittently during the summer and a three inch centrifugal which is used daily whenever the plant is working. The water is used to wash sand and gravel at the Johnston Rock Company plant. Provision is made to return any excess water to the stream after use in the plant.

Diversion 53 is that of the Plant Garden Pump from the west side of Butte Creek. The diversion is in Butte County and is located as herein-before described in Table 2.

A six inch DeLaval centrifugal pump is used to lift water from the channel into a concrete pressure pipe system which splits into laterals in the NW¼ SE¼ Sec. 5, T. 21 N., R. 2 E., M.D.B.& M. about three hundred feet below the head.

An area of 154.5 acres of nursery and garden is irrigated from the pipe system on lands of the United States Department of Agriculture, Plant Introduction Garden.

The pump which is equipped with a six inch outlet pipe has a rated capacity of 1000 gallons per minute operating under a static head of sixteen feet. It is actuated by a direct connection fifteen horsepower General Electric motor.

The United States Department of Agriculture has succeeded to the

rights of Rosa A. Stone set forth in the decree hereinafter submitted in Appendix II.

Diversion 54 is that of the Compton-Entler Ditch from the west side of Butte Creek through the west wing of the Colony Upper Dam. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A reinforced concrete dam about 120 feet long and with its crest about three feet above the original stream bed is used to divert water from the creek into Diversions 54, 55, and 56. The stream channel above the dam has been filled nearly level with the crest of the dam except on the sides where the flow into the diversions has prevented the deposit of sediment. Removable steel rails about four feet in height are spaced at 5 feet centers on the crest of the dam to support such flashboards as are necessary to divert the water. Eight inches of flashboards are usually used. There are two rectangular openings through the abutments of the dam which are used to spill water into the creek below the dam. The discharge through the spillway openings is regulated by horizontal flashboards.

A vertical screw gate is used to regulate the flow into a rectangular box which serves as a joint headworks for Diversions 54 and 55. The two diversions are further controlled by additional screw gates at the outlets of their respective intake pipes.

The intake at Diversion 54 consists of about 300 feet of 24-inch concrete pipe terminating in a concrete standpipe from which the water is conveyed through an earth ditch three-fourths of a mile in length to its division into two laterals in the NE¼ SE¼ Sec. 6, T. 21 N., R. 2 E., M.D.B.& M.

A total area of 306.8 acres of land is irrigated from the diversion on the following ranches:

Owner	Acres	Crop
Mary E. Roth	3.4	garden
Clarence S. Entler	75.0	alfalfa and garden
Bee Compton	228.4	grain and garden
Total	306.8	

The controlling section of the ditch is about four feet wide at the top, two feet wide on the bottom and one foot deep. The maximum capacity of the conduit is limited by the intake pipe to approximately 5.00 cubic feet per second. The normal irrigating head in 1939 was 4.00 cubic feet per second. The amount of water diverted during the period of investigation in 1939 has been tabulated in Table 20.

The decreed rights in the Compton-Entler Ditch are hereinafter set forth in Appendix II.

Diversion 55 is that of the Marybill Ditch from the west side of Butte Creek through the west wing of the Colony Upper Dam. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The same dam is used for Diversion 55 as that previously described under Diversion 54.

A vertical screw gate is used to regulate the flow into a rectangular concrete box which serves as a joint headworks for the intake pipes under Diversions 54 and 55. The two diversions are further controlled by additional screw gates at the outlets of their respective intakes.

The intake pipe leading from Diversion 55 consists of about 300 feet of 32-inch concrete pipe terminating in a concrete stand pipe from which a 24-inch concrete pipe about 1200 feet in length delivers the water to the SE¼ SW¼ Sec. 5, T. 22 N., R. 2 E., M.D.B.& M. where it connects with a number of open ditch laterals.

An area of 527.1 acres of alfalfa, grain, and orchard is irrigated and subirrigated from the diversion on the lands of A. F. Lieurance, known as the Marybill Ranch.

The maximum capacity of the Marybill Ditch is limited by the intake pipe to about 6.00 cubic feet per second. The normal irrigating head during the investigation was 4.00 cubic feet per second. The amount of water diverted during the period of the investigation in 1939 has been tabulated in Table 21.

The decreed rights in the Marybill Ditch, owned by A. F. Lieurance successor to H. C. Compton, are hereinafter set forth in Appendix II.

Diversion 56 is that of the Colony Upper Ditch from the east side of Butte Creek through the east wing of the Colony Upper Dam. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The same dam is used for Diversion 56 as that previously described under Diversion 54.

A vertical screw gate is used to regulate the flow through the short intake pipe. The conduit below the intake pipe consists of about 1800 feet of earth ditch to the Roberts Creek lateral where water is turned into Roberts Creek for use on the easterly portion of the area served. The main conduit continues as an earth ditch for about 400 feet where the conduit again divides with a lateral running in a westerly direction for use in irrigating a portion of the Parrott Investment Company lands and to act as a spillway back to the creek to obviate the necessity of manipulating the diversion dam. The main conduit continues from the division for about two miles to where it again divides as it enters Lot 64 of the Durham State Land Settlement.

A total area of 4086.0 acres of grain, alfalfa, orchard, truck and

pasture is irrigated from Diversion 56 in conjunction with Diversion 59 on the following tracts:

Owner	Normal Maximum Irrigated Acreage
Shareholders in Durham Mutual Water Company, Ltd.	3564.1
Parrott Investment Company	211.0
Samuel A. Atkins and Barbara Ina Atkins	30.0
E. A. Carlson and Gladys Carlson	36.7
D. A. Hook and W. S. Hook	30.0
Elmo Jacks and Louise Jacks	24.9
*Ralph J. Baxter, C. W. Baxter, F. T. Woell, and N. B. Woell	12.3
*Stephen Vernoga	47.3
*George Setka, Anna Setka, Joe Bebich, Sam Bebich and Steve Vlatkovich	96.7
*Corporation of America	20.0
*L. E. Wheelock and Nellie Wheelock	13.0
Total	4086.0

*Served from Colony Upper Ditch through syphon at Colony Lower Dam.

The ditch has an average top width of about seven feet, bottom width of about four feet and a depth of about four feet. It has a maximum capacity of approximately 40 cubic feet per second. The normal irrigating head during the investigation was about 30 cubic feet per second. The amount of water diverted during the period of the investigation in 1939 has been tabulated in Table 19.

The decreed rights of the parties using water from the Colony Upper Ditch are hereinafter set forth in Appendix II. A portion of the water under Application 2909 of E. L. Adams, Herbert W. Whitten and the Federal Land Bank of Berkeley is also diverted through the Colony Upper Ditch, spilled into Hamlin Slough and rediverted therefrom through Diversions 64 and 65.

Diversion 57 is that of the Ollinger Pump from the west side of Butte Creek. The diversion is in Butte County and is located as hereinbefore

described in Table 2.

A pump has been used to raise the water from the stream channel into the ditch system which leads directly onto the irrigated land. The diversion works have been washed out and had not been replaced at the time of the investigation. The total lift from the stream bed to the bank is about 15 feet.

An area of 156.5 acres of land is normally irrigated from the pump on the Ollinger Ranch now owned by The Federal Land Bank of Berkeley. The land was cropped with unirrigated barley in 1939.

The decreed right of The Federal Land Bank of Berkeley, successors to C. H. Ollinger, is hereinafter set forth in Appendix II.

Diversion 58 is that of the Wakefield Pump from the west side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A six inch centrifugal pump is used to lift water from a sump which lies outside the levee. The sump is connected with the creek by a pipe underneath the levee. A total lift of about twelve feet is made to deliver water into the ditch system which leads directly onto the irrigated land. The pump was operated by a twenty horsepower McCormick-Deering tractor in 1939. A total area of 48.0 acres of truck is normally irrigated from the ditch on the following ranches:

Owner	Normal Maximum Irrigated Acreage
Samuel A. Atkins	34.0
Varney F. Wakefield	14.0
Total	48.0

The maximum rate of diversion in 1939 was about two cubic feet per second. The pump was operated during occasional short periods only.

Diversion 59 is that of the Colony Lower Ditch from the east side of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A reinforced concrete floor and abutment type dam with a sixty-eight foot opening equipped with steel upright flashboard supports spaced eight feet apart is used to divert the water. The conduit consists of a continuation of the Colony Upper Ditch. The ditch extends to the lower end of the area served but is tapped throughout its length for use on the contiguous lands. The main ditch is about one mile in length and terminates in Lot 10 of the Durham State Land Settlement where 30-inch and 24-inch pipes are used to convey water across the channel of Butte Creek for use on the west side of the creek.

Water from the Colony Upper Dam may be allowed to pass on down the common ditch on the east side of the creek at the lower dam or may be turned into a 30-inch pipe line built under the floor of the dam for delivery on the west side of the creek.

The diversion is used in conjunction with Diversion 56 to irrigate 1364.6 acres of the lands of the shareholders in the Durham Mutual Water Company, Ltd. as shown in Table 3.

The diversion from the dam is made through two pipes through the east wing of the dam and the east levee of Butte Creek. Two screw lift vertical headgates are used at the pipe inlets to regulate the flow into the ditch which is about ten feet wide at the top, four feet wide on the bottom and four feet deep. The maximum capacity of the ditch is about thirty cubic feet per second.

The decreed rights of the Durham Mutual Water Company, Ltd. are hereinafter set forth in Appendix II. The company also has an inchoate

right initiated under the Water Commission Act as previously discussed under Application 9504.

Diversion 59A is that of the proposed Merrifield Pump from the east side of Butte Creek in the back-water of the Adams Dam under Diversion 60. The proposed diversion will be in Butte County and will be located as hereinbefore described in Table 2.

An area of 50.5 acres of the lands of B. A. Merrifield and Elizabeth C. Merrifield, heretofore served by the Colony Lower Ditch, will be irrigated under the proposed pumping plant.

Diversion 59B is that of the Brandt Pump from the west side of Butte Creek in the back-water of the Adams Dam under Diversion 60. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A four inch Yuba pump and a twelve inch Byron Jackson pump operated respectively by a 22 H.P. Model T. Ford and a 50 H.P. Waukesha gas engines are used to divert the water into an earth ditch five feet on top, two feet on the bottom and two feet deep. The capacity of the system is 6.00 cubic feet per second. A total area of 50.0 acres of general crops is irrigated on the lands of George Brandt and Edna May Brandt.

Diversion 60 has hereinbefore been described under Applications 2576, 2805 and 2909 filed under the provisions of the Water Commission Act.

Diversion 60A is that of the Roy White Pump from the west side of Butte Creek in the back-water of the Gorrill Dam under Diversion 61. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A six inch centrifugal pump operated by a 22 H.P. Sampson gas engine is used to divert the water into an earth ditch four feet on top, one foot on the bottom and two feet deep. The capacity of the system is 2.25 cubic feet per second. The water is utilized for the irrigation of 53.0 acres of beans and melons on the lands of Roy White.

Diversion 61 has hereinbefore been described under Applications 2777 and 4665 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 62 is that of the White Pumps from both sides of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

A 3-inch centrifugal pump, with a capacity of 0.50 cubic foot per second actuated by a Chevrolet engine, is used to lift water about fifteen feet directly onto 20.4 acres of truck irrigated on the west side of Butte Creek. A De Laval double suction horizontal split case centrifugal pump has been used by E. E. White on the east side of the creek with either a 20 H.P. Western Electric motor or a 25 H.P. La Crosse gas engine to irrigate 466.2 acres of rice.

Diversion 63 embraces five points from the backwater of the Western Canal Dam across Butte Creek. The diversions are in Butte County and are located as hereinbefore described in Table 2.

Two reinforced concrete abutments and floor type dams about twelve feet high have been constructed in two channels of Butte Creek to raise the water level sufficiently to back water about two and one-half miles upstream. Water is diverted from the canalized channel along the west levee by three pumps and two gravity conduits. The pumps are located in the SE¼ Sec. 13 (projected) and the W½ Sec. 24 (projected) T. 20 N., R. 1 E., M.D.B.& M. The pumps lift the water into canals outside the levee from where it is conveyed northerly and westerly for use on 2097 acres of the Goodspeed lands in the Rancho Aguas Frias. The smaller gravity conduit is about 2000 feet upstream from the diversion dams in the SE¼ Sec. 23 (projected) T. 20 N., R. 1 E., M.D.B.& M., and also conveys water in a westerly direction for use on the Rancho Aguas Frias. The larger of the

gravity conduits diverts immediately above the dam in the westerly channel. It is a continuation of the Western Canal which diverts water from the Feather River below Oroville.

The diversion system intercepts and diverts any water reaching the basin above the dam during the irrigation season for irrigation use on 22,129 acres served by the Western Canal Company on the west side of Butte Creek.

Diversion 64 has hereinbefore been described under Application 1656 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 65 has hereinbefore been described under Application 4663 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 66 has hereinbefore been described under Application 4664 filed with the Division of Water Resources under the provisions of the Water Commission Act.

Diversion 67 is that of the Lomo Springs Ditch and Pipe from Lomo Springs, tributary to the West Branch of Butte Creek. The diversion is in Butte County and is located as hereinbefore described in Table 2.

The diversion dam, constructed of rock and sod, is one foot high and twelve feet long. The ditch is 2/3 foot on the bottom, one foot on top and 2/3 foot deep. The ditch is one-fourth of a mile in length and has a grade of fifteen feet per 1000 feet. A three-inch iron pipe line is laid in the bottom of the ditch to convey water to Lomo Inn and service station. The combined capacity of the pipe and ditch is about 0.50 cubic foot per second.

In addition to the use of water for domestic and resort purposes, an area of 2.0 acres of garden and orchard is irrigated.

APPENDIX II

JUDGMENT

Central California Investment Co., a corporation vs. John Crouch Land Company, et al.

IN THE SUPERIOR COURT OF THE COUNTY OF SUTTER

STATE OF CALIFORNIA

Central California Investment Company, a Corporation, Plaintiff,

-vs-

John Crouch Land Company, a corporation, L. D. Harris, Louise Murphy, J. F. Entler, H. C. Compton, Mrs. Elsie Drexler, Mrs. George Carson, C. F. Lott Land Company, a corporation, Robert W. Durham, Mrs. Caroline R. Durham, Parrott Investment Company, a corporation, Leland Stanford Junior University, a corporation, Benjamin Crouch, Balfour Guthrie Investment Company, a corporation, James D. Phelan, C. F. Lott, Mrs. L. M. Allen, C. H. Ollinger, L. R. Falkner, Mrs. Ethel Faulkner Copeland, J. W. Peters, E. T. Reynolds, S. G. Eastman, Caroline Thomasson, administratrix of the estate of N. H. Thomasson, deceased, T. Cronin, George M. Gray, D. Cramer, J. H. Lucas, Matthew Schwein, Anna Schwein George, F. C. Peterson, Mrs. Mary Compton, W. G. Patrick, B. Compton, A. N. Compton, T. A. Johnson, Butte Creek Consolidated Dredging Company, a corporation, John Doe George, John Doe Compton, Anna Schwein George, F. C. Peterson, John Doe Drexler, John Doe Carson, John Doe Durham, John Doe Allen, John Doe Copeland, John Doe George, John Doe Compton, First Doe, Second Doe, Third Doe, Fourth Doe, Fifth Doe, Sixth Doe, Seventh Doe, Eighth Doe, Ninth Doe, Tenth Doe, First Roe, Second Roe, Third Roe, Fourth Roe, Fifth Roe, Sixth Roe, Seventh Roe, Eighth Roe, Ninth Roe and Tenth Roe; The Faulkner Estate Company, a corporation, Eliza Hegan, Successor in interest of James Hegan, deceased, and J. W. Browning, successor in interest of Balfour Guthrie Investment Company, a corporation;

AND

Albert Wahl, Susie Miller, Wm. Lausen, C. S. Ward, Lottie A. Hopkins, Lottie C. Howard, Murdock Land Company, a corporation, Gould Land Company, a corporation, Moulton Irrigated Lands Company, a corporation, W. T. Baldwin, T. L. Quigley, J. F. Harmon, A. L. Foster, Rogene Scribner, Eva B. Hewlett, Elizabeth H. Hough, Mrs. L. M. Watts, Mrs. Sue R. Biggs, Anna Biggs Gaddis, Edward F. Biggs, E. J. Robinson, Mrs. E. S. Briscoe, J. R. Wilson, Thos. White, Mrs. Evelyn J. Smith, Harriet Maud Skaggs, Mrs. Mary James, James H. Doolittle, Chico and Oroville Land Company, R. P. Glass, Stanley L. Sproul, Georgie F. Sproul, James H. Jones, Emmons White, O. C. P. Goodspeed, Ryland C. Goodspeed, Jennie M. Hess, William T. Jones, Elsie A. Drexler, Yukon Dredging Co., Pacific Gas and Electric Company, Mrs. George Carson, John B. Coleman, Sacramento Outing Club, a corporation, West Butte Country Club, a corporation, Colusa Shooting Club, a corporation, Annie Hawn, H. F. Gerth, Elizabeth Santee, James Carroll, John Carroll, J. J. Carrol, Maggie Wilson, Mary E. Gray Marian L. Goodspeed, Ryland C. Goodspeed, Junior, a minor, by Marian L. Goodspeed, guardian of his person and estate, Orville C. Pratt, Jr., and Annie A. Stanford,

Defendants.

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JUDGMENT BY COURT

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I

This action was commenced in the Superior Court of the County of Colusa, in about the month of October, 1911, and was transferred for trial to the County of Sutter.

At the time the Complaint in the action was filed the parties Defendant were the persons above named as Defendants commencing with "John Crouch Land Company" and continuing down to and including "Tenth Roe".

Answer was made by all of the Defendants last above named and Cross-Complaint was made by Defendant Leland Stanford Junior University, under its proper name of The Board of Trustees of the Leland Stanford Junior University, against the Plaintiff and against all of the other Defendants.

All of the Defendants answered said Cross-Complaint, and some of them made Cross-Complaints therein.

The issues being made up as aforesaid the cause coming on for trial before Judge K. S. Mahon, without a Jury, in the Court first above named, on the _____ day of May, 1916, on the pleadings aforesaid.

Motion was made by Thomas Ruthledge, Attorney for Plaintiff, that the cause of action as to Plaintiff and as to all pleadings filed on its behalf, and as to all pleadings therein so far as they affect Plaintiff, be dismissed. It was stipulated by all of the Attorneys of all of the parties to the action that said Motion be granted, and said Motion was thereupon granted by order of the Court.

It was also stipulated by and between the said Attorneys of all of the said parties to the said action that the trial of said cause should proceed upon the Cross-Complaints and the Answers thereto on file therein. Several days were consumed in taking testimony before the Court.

During the progress of the trial, and on June 2, 1916, on Motion of W. H. Carlin, Attorney for Defendant C. F. Lott Land Company, the Court made an Order that all persons owning or claiming lands riparian to said Butte Creek and also all persons owning or claiming rights to waters from Butte Creek by appropriation, or otherwise, not already parties to this action, be brought in to this action as parties thereto by appropriate pleadings and proceedings, excepting only the "Central California Investment Company, a corporation", Original Plaintiff to this action, and its successors in interest, as to the lands in the original Complaint herein described. The trial of said cause was continued to July 1st, 1916, in order that the names of all of said persons to be brought into this action in accordance with said Order of Court, might be ascertained and presented to the Court.

On July 1st, 1916, and pursuant to said Order of June 2, 1916, the Judge of said Court made an Order that the above-named Defendants commencing with "Albert Wahl" and ending with "Mary E. Gray" be brought into said action and made parties Defendant therein, and that the Cross-Complaints on file in said action be amended so as to contain the names of all of the persons thus and thereby brought into said action. It was further ordered that said Cross-Complaints might be amended in other respect as desired by the respective parties having such Cross-Complaints, and that any person then a party to said action and any such new and additional parties might make Cross-Complaints as advised.

Under and pursuant to said last mentioned Order of Court, amended Cross-Complaints were made and served and Answers thereto and

Counter-Cross-Complaints were made and filed.

The four defendants last named in the above title to this action Marian L. Goodspeed and Ryland C. Goodspeed, Junior, a minor, by Marian L. Goodspeed, guardian of his person and estate, Orville C. Pratt Jr., and Annie A. Stanford made and filed their appearance herein through the filing of an answer to the amended cross-complaint of The Board of Trustees of the Leland Stanford Junior University, and also cross-complaints against said The Board of Trustees of the Leland Stanford Junior University.

The trial of said cause has never been resumed, and no other or further proceedings have ever been had in said action.

In about the month of April, 1918, the State Land Settlement Board created by Act of the Legislature of the State of California approved June 1st, 1917, negotiated with The Board of Trustees of the Leland Stanford Junior University for the purchase by said State Land Settlement Board from said The Board of Trustees, of about 4000 acres of riparian and irrigable lands on said Butte Creek, and for the purchase of about 2400 acres standing of record in the name of said C. F. Lott Land Company of riparian and irrigable lands on said Butte Creek, and as a condition for such and said purchase said State Land Settlement Board required that the water rights of said Board of Trustees and of said C. F. Lott Land Company be determined and settled and that the interests of said The Board of Trustees and of said C. F. Lott Land Company in the waters of Butte Creek be definitely fixed.

Thereupon, and in order that said proposed sale and purchase of land might be consummated, and that said State Land Settlement

Board might become the owner of such and said lands by purchase from said The Board of Trustees and C. F. Lott Land Company, or their successors, together with water and water rights from said Butte Creek for the irrigation of said lands and for other uses and purposes thereon, an Agreement and Stipulation in writing was entered into, dated April 20, 1918, by and between the parties to said action hereinafter named, settling and determining and fixing the water rights of said persons in and to the waters of Butte Creek, and providing that judgment in this action might be duly made and entered at any time, upon application of any person interested therein in accordance with the said Agreement and Stipulation, and that such judgment should be a final adjudication of the rights of said persons in and to the waters of said Butte Creek. It was provided also in said agreement and Stipulation that findings of fact, and conclusions of law, in said action, were and should be waived by the said parties thereto, and that judgment might be entered in said action without findings of fact or conclusions of law.

Because of said Agreement and Stipulation and such and said determination and settlement as to the water rights of said persons in and to the waters of said Butte Creek, the said proposed sale and purchase of said lands by said State Land Settlement Board from said Board of Trustees and from the successors of C. F. Lott Land Company was thereafter consummated and said State Land Settlement Board became the owner of said lands and of the water and water rights belonging thereto and as hereinafter set forth and adjudged.

The said Agreement and Stipulation consisting of various and numerous duplicates, all constituting one Agreement and Stipulation, is and are on file herein, and are hereby referred to and made a part of this decree.

Said Agreement and Stipulation is signed and executed, either in person or by attorneys of record, by the following named parties to said action, to wit:

The Board of Trustees of the Leland Stanford Junior University,
C. F. Lott Land Company
Parrott Investment Company,
James D. Phelan,
Bee Compton,
A. M. Compton,
H. C. Compton,
J. F. Entler,
Benjamin Crouch,
John Crouch Land Company,
Albert Wahl,
Stanley L. Sproul,
Georgie F. Sproul,
James H. Jones,
Adolph and Kenneth Beck,
W. G. Patrick,
El Oro Dredging Company,
Murdock Land Company,
Robert W. Durham,
Eliza Hegan,
The Faulkner Estate Company,
J. W. Browning,
Moulton Irrigated Lands Company,
Gould Land Company,
Dodge Land Company,
Herbert W. Whitten,
W. T. Baldwin,
Harriett Maude Skaggs,
Mrs. Mary James,
James H. Doolittle,
Emily S. Briscoe,
Sue R. Biggs,
Anna Biggs Gaddis,
E. F. Biggs,
Emmons White,
Charles S. Ward

A written stipulation and agreement as to the rights and interests of said C. F. Lott Land Company and said The Board of Trustees of the Leland Stanford Junior University, or of the State of California, as sole successor in interest of all of the water rights owned or claimed by said C. F. Lott Land Company and said Board of

Trustees in and to the waters of said Butte Creek, was made and executed by Defendants O. C. P. Goodspeed, Ryland C. Goodspeed, Ryland C. Goodspeed Junior, a minor, by Marian L. Goodspeed, guardian of his person and estate, Marian L. Goodspeed, Annie A. Stanford and Orville C. Pratt, Jr., by Orville C. Pratt, Jr., their Attorney of Record in this action, by the terms of which it was stipulated and agreed that the Court in this cause might make and enter a judgment herein quieting the title of said C. F. Lott Land Company and said Board of Trustees of the Leland Stanford Junior University, or of the State of California, as sole successors in interest of all of the water rights owned or claimed by said C. F. Lott Land Company and Board of Trustees to forty second feet, or sixteen hundred miner's inches, out of the total flow of said Creek, at its lowest stage (assumed for the purposes of this stipulation to be 108 second feet), or to a proportion of said flow at any stage of said Creek equivalent to forty one-hundred-eights thereof (40/108). Said stipulation is on file herein, and is hereby referred to and made a part of this decree.

On motion of Wilson & Wilson and McCoy and Gans, as attorneys for said The Board of Trustees of the Leland Stanford Junior University, an order of Court, was made dismissing this action, and any action herein, as to all parties herein who have not signed, as aforesaid, the said agreement and stipulation, dated April 20, 1918, excepting O. C. P. Goodspeed, Ryland C. Goodspeed, Orville C. Pratt, Jr., Marian L. Goodspeed, Ryland C. Goodspeed, Junior, a minor, and Annie A. Stanford, who remain as parties herein.

Now, therefore, in consideration of the matters hereinbefore mentioned and set forth, and under and pursuant to the said Agreement and Stipulation, on Motion of Wilson & Wilson and McCoy &

Gans, as Attorneys for said The Board of Trustees of the Leland Stanford Junior University, it is hereby adjudged and decreed as follows:

I.

That there are certain waters in said Butte Creek known as Foreign Waters, which have been taken from the west branch of the Feather River and carried to and used at what is known as the De Sabla Power Plant, now owned by the Pacific Gas & Electric Company, and which are not of the natural waters of said Creek. These waters are now owned by the Parrott Investment Company, a corporation and James D. Phelan, Mary L. Phelan, and Alice Phelan Sullivan, the latter now being succeeded by the Alice Phelan Sullivan Corporation, and Ben E. Crouch, and said named persons, or their Successors in interest, shall hereafter be entitled to take from Butte Creek whatever amounts of such Foreign waters they may cause to be turned into said Creek, from time to time, less 5% of such amount of water, which it is hereby determined and agreed will be lost in flowing from the point at which the same is turned into said Butte Creek to the point of diversion. As between said named persons, the first 10 second feet, or 400 miner's inches, less 5% thereof, are to be taken by Ben E. Crouch, and the balance of such Foreign Waters, less 5% thereof, shall be divided equally between said Parrott Investment Company, on the one hand, and said James D. Phelan, Mary L. Phelan and Alice Phelan Sullivan Corporation, upon the other hand. Should for any reason the point of emptying said Foreign Waters into Butte Creek be changed to a point lower down said Creek, in that case 5% of the water shall be deducted for loss and the said parties shall have the same rights to said water and to divert the same as at the present point of diversion.

II.

That for the purpose of this decree the minimum of water naturally flowing in Butte Creek, that is, without said Foreign Waters, is considered and decreed to be 108 second feet, or 4320 miner's inches of water.

That said 108 second feet of water, or 4320 miner's inches, are hereby apportioned and divided between and among the said persons named herein as follows:

To Ben E. Crouch 16 second feet, or 640 miner's inches.

To Adolph and Kenneth Beck, and their successors in interest, and to Rosa A. Stone, and her successors in interest, 4 second feet, or 160 miner's inches.

To El Oro Dredging Company, successor in interest to T. D. McLaughlin, 1 second foot, or 40 miner's inches.

To Joseph F. Entler, W. G. Patrick, A. M. Compton and B. Compton, 5 second feet, or 200 miner's inches. As among said named persons Joseph F. Entler shall be entitled to 1-2/3 second feet, or 66-2/3 miner's inches, and A. M. Compton, B. Compton and W. G. Patrick shall be entitled to 3-1/3 second feet, or 133-1/3 miner's inches.

To H. C. Compton 4 second feet, or 160 miner's inches.

To Robert W. Durham, Eliza Hegan and Faulkner Estate Company 4 second feet, or 160 miner's inches. As among said named persons Robert W. Durham shall be entitled to 50% of such water, and Eliza Hegan and the Faulkner Estate Company shall be entitled to the remaining 50% thereof.

To J. W. Browning 6 second feet, or 240 miner's inches.

To C. F. Lott Land Company, a corporation, 2 second feet, or 80 miner's inches.

To said State Land Settlement Board, as successors to said C. F. Lott Land Company, 15 second feet, or 600 miner's inches.

To said State Land Settlement Board, as successor to The Board of Trustees of the Leland Stanford Junior University 25 second feet, or 1000 miner's inches.

That 2 second feet, or 80 miner's inches, are hereby set aside for and apportioned to C. H. Ollinger.

That the balance of 24 second feet from said 108 second feet, or 960 miner's inches, are to be allowed to remain in said Butte Creek and flow down the natural channel thereof and past the lands of the said persons hereinbefore mentioned for the use of the other riparian owners along said Creek.

III.

That in case the waters naturally flowing in said Butte Creek should at any time become less than 108 second feet, or 4320 miner's inches, then the amounts of water hereinbefore mentioned and designated to go to the said persons, respectively, shall be proportionately diminished. Also, whenever the waters naturally flowing in said Creek shall exceed the said amount of 108 second feet, or 4320 miner's inches, then the amount of water hereinbefore mentioned and designated to go to the said persons, respectively, shall be proportionately increased.

IV.

That it is intended by this decree that the natural waters of said Butte Creek shall be divided among and apportioned to the said named persons in the proportions as follows:

To Ben E. Crouch 16/108; to El Oro Dredging Company, as successors to Adolph and Kenneth Beck, 2/108; to the successors

of Rosa A. Stone 2/108; to El Oro Dredging Company, as successor to T. D. McLaughlin 1/108; to Joseph F. Entler, W. G. Patrick, B. Compton and A. M. Compton 5/108; to H. C. Compton 4/108; to Robert W. Durham, Eliza Hegan and the Faulkner Estate Company 4/108; to J. W. Browning 6/108; to C. F. Lott Land Company 2/108; to the said State Land Settlement Board 40/108; to C. H. Ollinger 2/108; and to and for the use of the other riparian owners upon and along said Creek the remaining 24/108.

V.

That it is hereby decreed that 40 second feet of the waters heretofore owned by C. F. Lott Land Company and The Board of Trustees of the Leland Stanford Junior University, and which were appurtenant to their said lands, shall go with and be and become appurtenant to the lands sold and conveyed by said C. F. Lott Land Company and said Board of Trustees to said State Land Settlement Board, and that the remaining 2 second feet heretofore belonging to said C. F. Lott Land Company shall be and remain appurtenant to other lands heretofore owned by said C. F. Lott Land Company, it being the purpose and intention of this decree that 40 second feet or 1600 miner's inches, or 40/108, of the Natural waters of said Butte Creek shall go with and be appurtenant to the said lands sold and conveyed to said State Land Settlement Board for the purpose of State Colonization.

VI.

That the division and apportionment of the natural waters of said Butte Creek and also of the said foreign waters flowing therein shall be a full and complete and final determination between and among the said persons hereinbefore mentioned of all of their

interests and rights and claims in and to the waters of said Butte Creek, and that said persons shall have the right to divert the said portions of the waters of said Creek, respectively from said Creek and the channels thereof and use the same for any useful and beneficial purposes.

VII.

That the provisions of this decree, and the determinations as to the respective rights in said Butte Creek set forth herein, are to inure to the benefit of any Successors in interest of the said persons named herein.

VIII.

That all of the parties to this decree and their agents, counselors, employees, Attorneys and all persons acting in aid or assistance of them are, and each one of them is, hereby perpetually restrained and enjoined from taking or diverting any of the waters of said Butte Creek, except in accordance with the rights and interests determined and set forth herein, and they are also hereby perpetually restrained and enjoined from doing any act or thing which would prevent the said parties to this decree from having and receiving the waters of said Butte Creek in accordance with the rights and interests determined and set forth herein.

Done in open Court this 25th day of May, 1920.

K. S. MAHON

Judge of the Superior Court.

STATE OF CALIFORNIA)
) ss.
COUNTY OF SUTTER)

I, ALBERT D. BROWN, County Clerk of the County of Sutter, State of California, and Clerk of the Superior Court, do hereby certify that I have compared the foregoing copy of a Judgment and of the endorsements thereon, with the original records of the same remaining in this office, and that the same are correct transcripts thereof, and of the whole of said original records.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Superior Court at my office in the County of Sutter, this 2nd day of November, 1923.

(S E A L)

(Signed) Albert D. Brown
County Clerk.

By _____
Deputy Clerk

STATE OF CALIFORNIA)
) ss.
COUNTY OF BUTTE)

I, CLARA COFFMAN, County Recorder in and for the County of Butte, State of California, do hereby certify that there is recorded in the office of the County Recorder of the County of Butte, State of California, a Judgment, Central California Investment Company, a Corporation, being the Plaintiff and John Crouch Land Company, a corporation, et als being the Defendants, and that the same is recorded in Book 185, on page 159 and following in Deeds.

WITNESS my hand and official seal this 2nd day of November, 1923.

(S E A L)

(signed) Clara Coffman County Recorder
In and for the County of Butte,
State of California.

CHANGES IN OWNERSHIP

The names of the present owners of allotments hereinbefore set forth in paragraphs I and II of the decree and the quantities being used by them are as follows:

Name	Amount-cu.ft.per sec.
George E. McLain Dayton Mutual Water Company, Ltd.	3.33 - Foreign Water 16.00 - Butte Creek
M. and T. Incorporated Parrott Investment Company	All of foreign water except 3.33 c.f.s.*
Parrott Investment Company	2.00 (Butte Creek)
U.S. Department of Agriculture	2.00 (Butte Creek)
Donald Hale and Alice Hale	3.00 (Butte Creek)
Clarence S. Entler 2/3 and Mary E. Roth 1/3	1.67 (Butte Creek)
Bee Compton	3.33 (Butte Creek)
A. F. Lieurance	4.00 (Butte Creek) 5.00
The Federal Land Bank of Berkeley	2.00 (Butte Creek)
C. W. Baxter, F. T. Woell and N. B. Woell	1.00 (Butte Creek) 2.
Stephen Vernoga	1.00 (Butte Creek)
Corporation of America Joe Bebich, et al. L. E. Wheelock and Nellie Wheelock	0.40 (Butte Creek) 1.34 (Butte Creek) 0.26 (Butte Creek)
Durham Mutual Water Company, Ltd.	40.00 (Butte Creek) 41.70

*Modified by decree of the Superior Court of the State of California, in and for the County of Butte in Case No.11483.

APPENDIX III

Memorandum re Rotation Agreement

Little Butte Creek

MEMORANDUM re ROTATION AGREEMENT LITTLE BUTTE CREEK

Prepared by : T. R. Simpson on: July 29, 1939

The ditch owned by Messrs. Skillin, March and Statham is hereinafter referred to as the Burke Ditch.

Commencing at 8:00 o'clock A.M. on July 31st 1939, all water available for irrigation in Little Butte Creek at the head of the Burke Ditch will be pooled in one irrigation head and the use thereof rotated until September 30th 1939, in accordance with the following schedule:

July 31 to Aug. 2 -- McLain
Aug. 2 to Aug. 4 -- Skillin
Aug. 4 to Aug. 6 -- March
Aug. 6 to Aug. 8 -- Statham
Aug. 8 to Aug. 10 -- McLain
Aug. 10 to Aug. 13 -- Skillin
Aug. 13 to Aug. 15 -- March
Aug. 15 to Aug. 17 -- Statham
Aug. 17 to Aug. 19 -- McLain
Aug. 19 to Aug. 21 -- Skillin
Aug. 21 to Aug. 24 -- March
Aug. 24 to Aug. 26 -- Statham
Aug. 26 to Aug. 28 -- McLain
Aug. 28 to Aug. 30 -- Skillin
Aug. 30 to Sept. 1 -- March
Sept. 1 to Sept. 4 -- Statham
Sept. 4 to Sept. 6 -- McLain
Sept. 6 to Sept. 8 -- Skillin
Sept. 8 to Sept.10 -- March
Sept.10 to Sept.12 -- Statham
Sept.12 to Sept.14 -- McLain
Sept.14 to Sept.17 -- Skillin
Sept.17 to Sept.19 -- March
Sept.19 to Sept.21 -- Statham
Sept.21 to Sept.23 -- McLain
Sept.23 to Sept.25 -- Skillin
Sept.25 to Sept.28 -- March
Sept.28 to Sept.30 -- Statham

The resident engineer of the Division of Water Resources will take care of the opening of the Burke Dam at 8:00 o'clock A.M. on each of the days that McLain is to receive the water under the above schedule and will close the dam at 8:00 A.M. on the days that McLain is to cease using water.

0.50 cubic foot per second is to be left flowing in the head of the Burke Ditch during each of the above two-day periods, when McLain is to receive the water rotation head, for the purpose of keeping the Burke Ditch soaked up down to the Skillin Ranch.

Mrs. Evers is to confine her irrigation of that portion of her lands that drains back to Little Butte Creek below the Burke Dam to the two-day periods when McLain is to receive the rotation heads; and the remainder of her lands may be irrigated at any time.

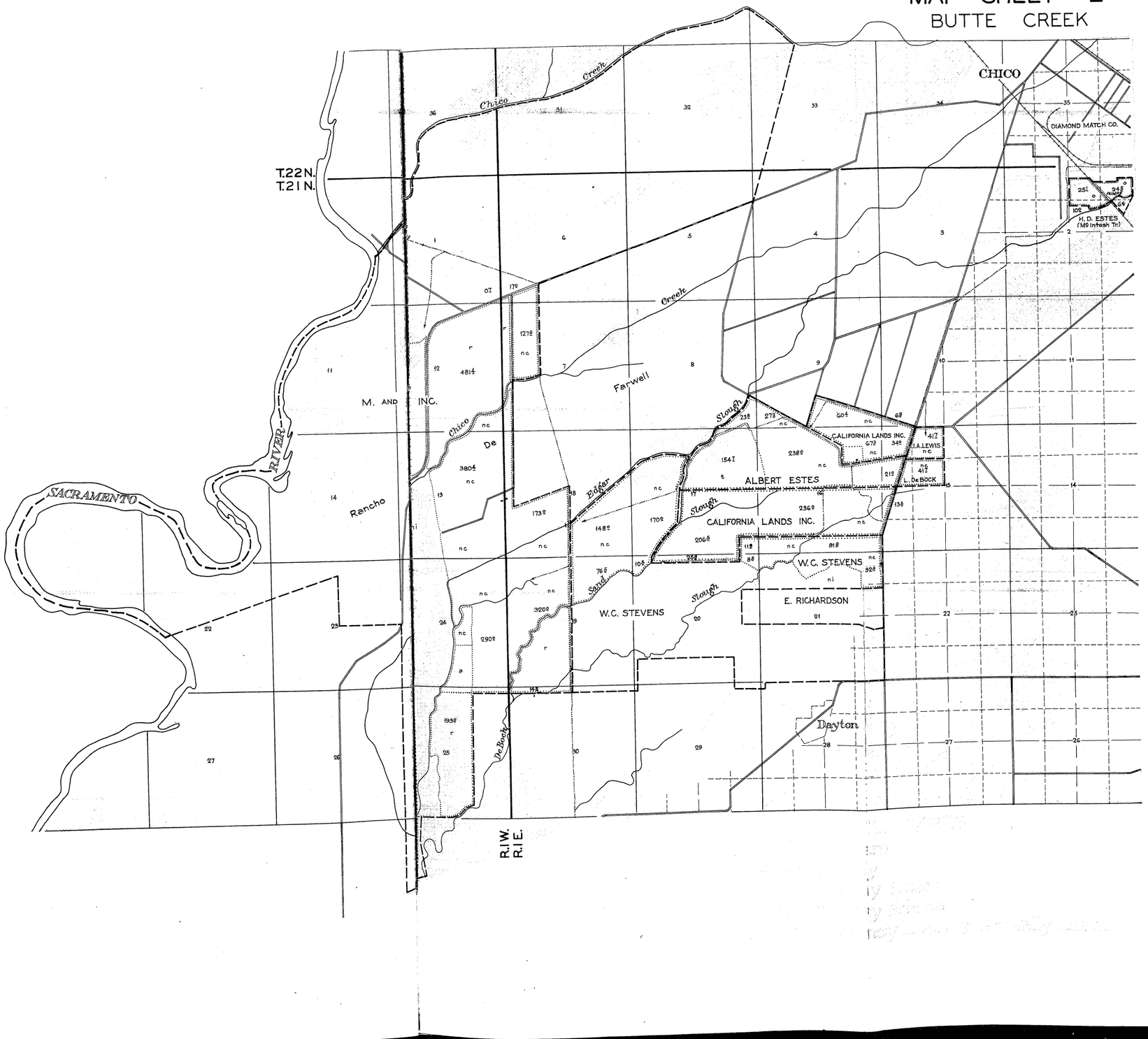
The partners in the Burke Ditch will take care of the opening of their taps when they are to receive water and the closing thereof when they are to cease using water at 8:00 A.M. in accordance with the above schedule.

Following the above schedule of rotation is for the purpose of getting through a two-month period of emergency low flow conditions in a critically dry year, and is not to be construed as an admission by any interested party that any of the rights on Little Butte Creek are as above set forth, and such rotation is not to in any manner prejudice any rights now claimed or which may hereafter be asserted.

MAP SHEET 1
BUTTE CREEK

MAP SHEET 2

BUTTE CREEK



MAP SHEET 3
BUTTE CREEK

T. 22 N.
T. 21 N.
T. 21 N.
T. 20 N.
R. 1 E.
R. 2 E.
Centerville
Paradise
Oroville
RAILROAD
BUTTE CREEK
Slough
D. HALE
U.S. PLANT GAR.
PARROTT INVESTMENT CO.
G. E. McLAIN
L. K. THOMASSON et al
Edgar
M. E. ROTH
E. SENTLER
YUBA CONSOLIDATED GOLD FIELDS
A. F. LIEURANCE
FED. LAND BANK of BERKELEY
V. E. WAKEFIELD
S. A. ATKINS
E. A. & G. CARLSON
HOOK BROS.
E. JACKS
CALIF. LANDS, INC.
C. W. BAXTER et al
B. COMPTON
NORTHERN
SOUTHERN
ELECTRIC
PACIFIC
DURHAM MUTUAL WATER COMPANY
S. VERNOGA
G. SETKA et al
CALIF. LDS. INC.
L. E. WHEELOCK
SYPHON
Durham
G. BRANDT
E. ADAMS et al
Esquon
Rancho
Nelson
Hamlin
Farias
R. C. GORRILL
A. WHITE
E. E. WHITE
Canal
Western
Aguas
Rancho

SOIL TYPES

Loam

Clay

Clay Loam

Clay Adobe

Sandy Loam & Gravelly Loam

MAP SHEET 4
BUTTE CREEK

T.23N.
T.22N.

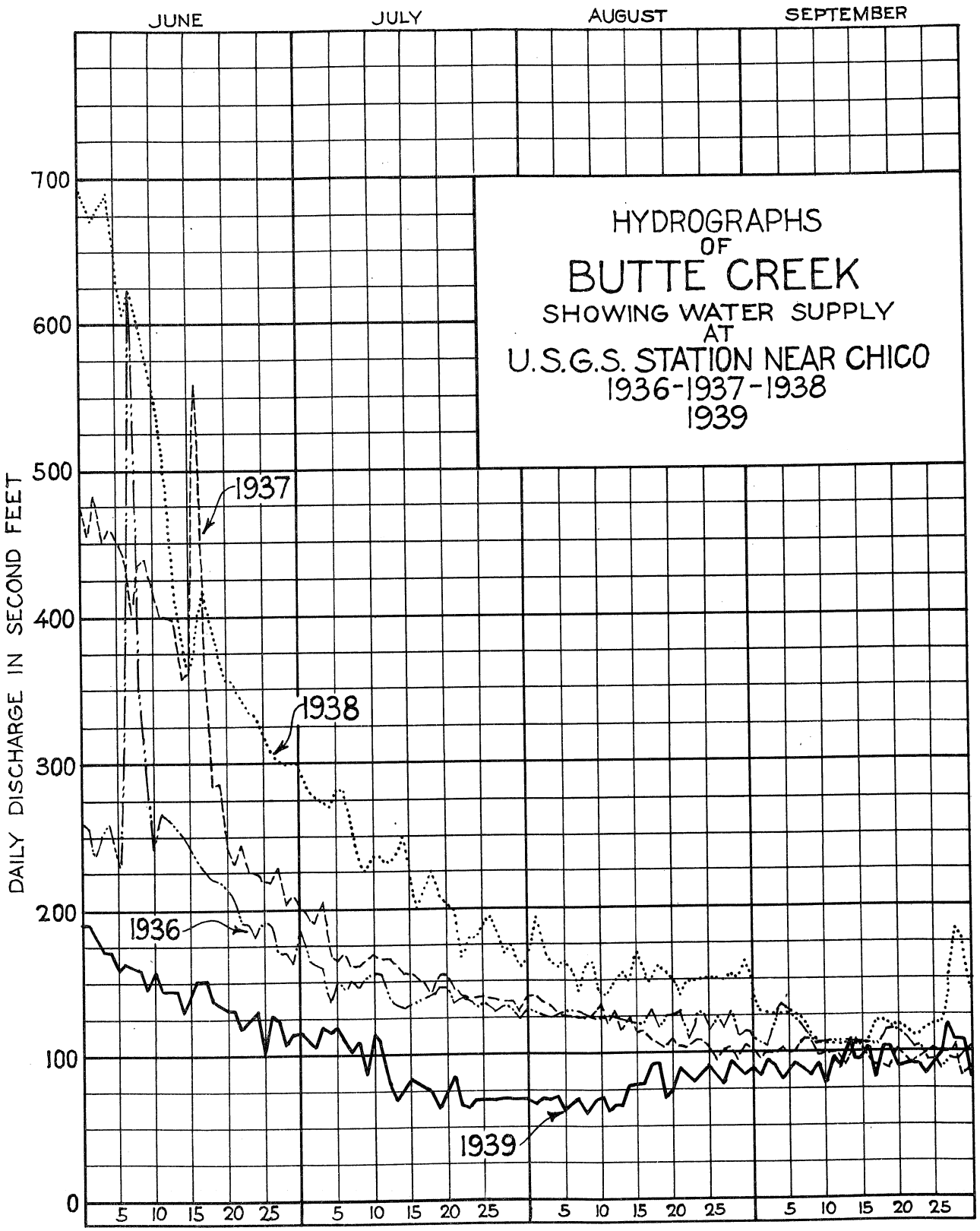
R3E

R2E

SOIL TYPES

- Loam
- Clay
- Clay Loam
- Clay Adobe
- Sandy Loam & Gravelly Loam

PLATE 5


JUNE
JULY
AUGUST
SEPTEMBER
HYDROGRAPHS
OF
BUTTE CREEK
SHOWING WATER SUPPLY
AT
U.S.G.S. STATION NEAR CHICO
1936-1937-1938
1939
DAILY DISCHARGE IN SECOND FEET
700
600
500
400
300
200
100
0
1937
1938
1936
1939
5 10 15 20 25
5 10 15 20 25
5 10 15 20 25
5 10 15 20 25

KEY OF NUMBERS AND NAMES OF DIVERSIONS

Listed in the Order of Map Sheets 1 to 6

MAP SHEET No. 1

No Diversions

MAP SHEET No. 2

No Diversions

MAP SHEET No. 3

50. Parrott
51. Hale
52. Johnston Pump
53. Plant Garden Pump
54. Compton-Entler
55. Marybill
56. Colony Upper
57. Ollinger Pump
58. Wakefield Pump
-- Faulkner Pump (proposed)
59. Colony Lower
59A. Merrifield Pump
59B. Brandt Pump
60. Adams
60A. Roy White Pump
61. Gorrill
62. White Pumps
63. Western Canal Dam and Goodspeed Pumps
64. Adams - Hamlin Slough
65. Adams - Hamlin Pump
66. Gorrill - Hamlin

MAP SHEET No. 4

16. Walker (Maple Springs)
17. Downs Spring
16A., 18. Hamilton (Musselman)
19. Mosquito
20., 20A. Richardson
21. Meadowbrook
22. (Paradise Irrigation District ((Magalia Dam)
23. Nickerson
23A. Vandegrift Little Butte
24. Sagi Pipes
24A. Hook Dam
24B. Vandegrift Middle Butte
24C. Vandegrift Spring
24D. Vandegrift West Branch
24E. Michaels
25. Hupp Canal
25A. Evers Spring
26. Ethel (A. E. Smith)
26A. Eureka Middle
26B. Eureka Pump
27. Ripley Spring
28. La Monte
28A. Eureka Little
28B. Post Pump
29. Belden (Karl Creek)
30. Evers
31. Burke
32. McLain
33. McEnespy North
34. McEnespy Main
34A. McEnespy Pipe
35. Mann Spring
47. Centerville Canal
48. Sorensen
49. Electric Mining Co.

KEY OF NUMBERS AND NAMES OF DIVERSIONS (Cont'd.)

MAP SHEET No. 5

10A.)
10B.)Diamond Match
10C.)
11. Olson
12. Crewe
13. Webb
14. Duensing
14A. Duensing Spring
15. Toadtown
45. Butte Creek Canal
45A. Butte Bell
45B. McLain Sluice
46. Smith
67. Lomo Springs
-- Spangler

MAP SHEET No. 6

1. Jonesville Blocks
2. Mickey-Minderman Spring
3. Mickey (Jones)
4. Mickey-Minderman
5. Lucas-Jones
5A. Willow Creek System
5B. Colby Creek System
6. Cirby Ditches
7. Stevenson Upper
8. Stevenson Lower
8A.)
8B.)Abietine
8C.)
9. Lucas Springs
9A. McGann Springs
10. Diamond Match (Malloy)
36. Davis
36A. Lucas
37. Thomas
38. Critchfield Pipe (well)
39. Welch Pipe
40. Colgan Pipe
41. Kaufman Pipe (well)
42. Houghland Pipe (well)
43. Williamson Pipe (well)
44. Butte Meadows

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES
EDWARD HYATT, STATE ENGINEER

BUTTE CREEK STREAM SYSTEM

SHOWING

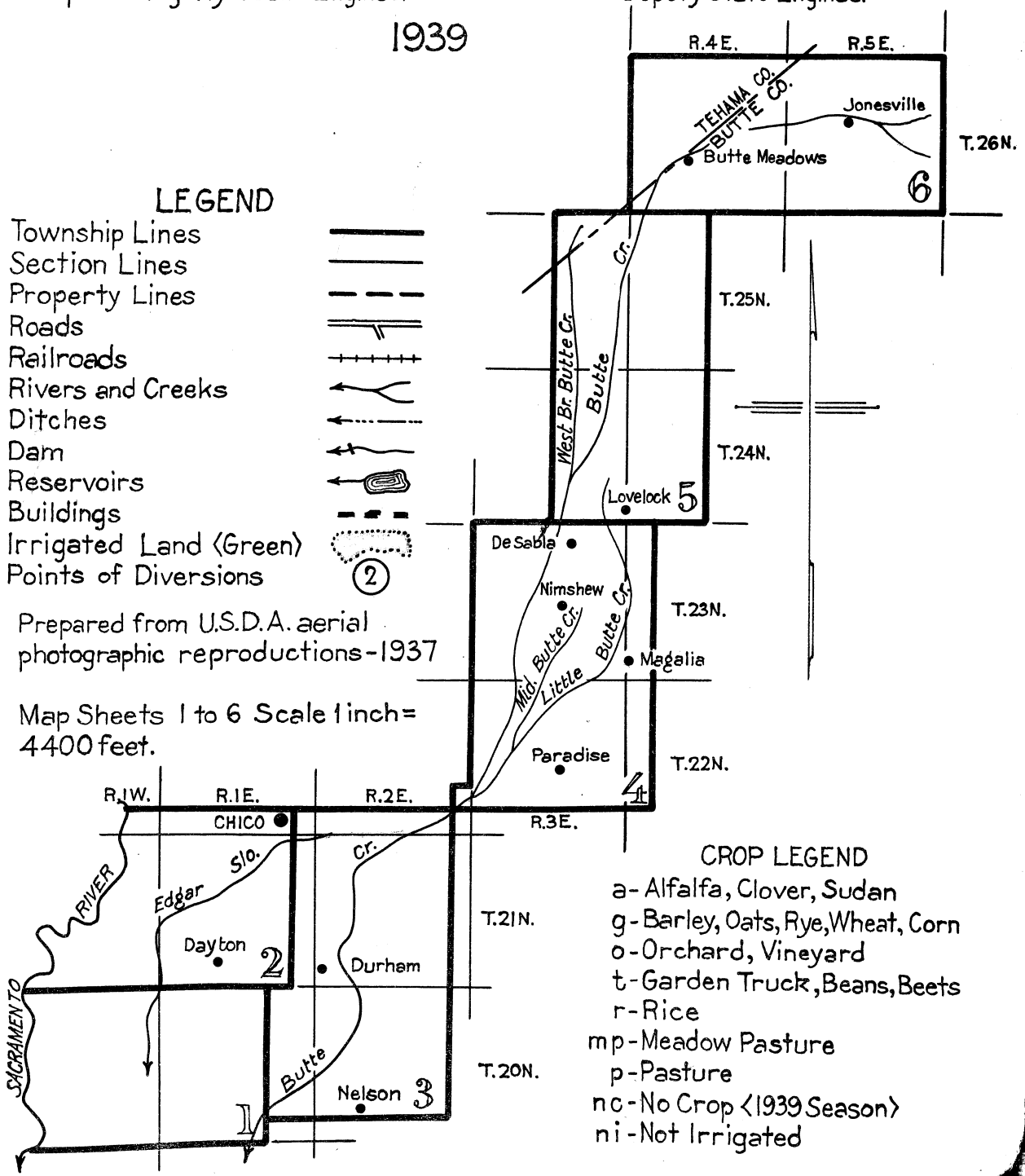
DIVERSIONS AND IRRIGATED LANDS

BUTTE COUNTY, CALIFORNIA

Prepared under direction of
GORDON ZANDER
Supervising Hydraulic Engineer

Approved by
HAROLD CONKLING
Deputy State Engineer

1939



LEGEND

Township Lines	
Section Lines	
Property Lines	
Roads	
Railroads	
Rivers and Creeks	
Ditches	
Dam	
Reservoirs	
Buildings	
Irrigated Land (Green)	
Points of Diversions	(2)

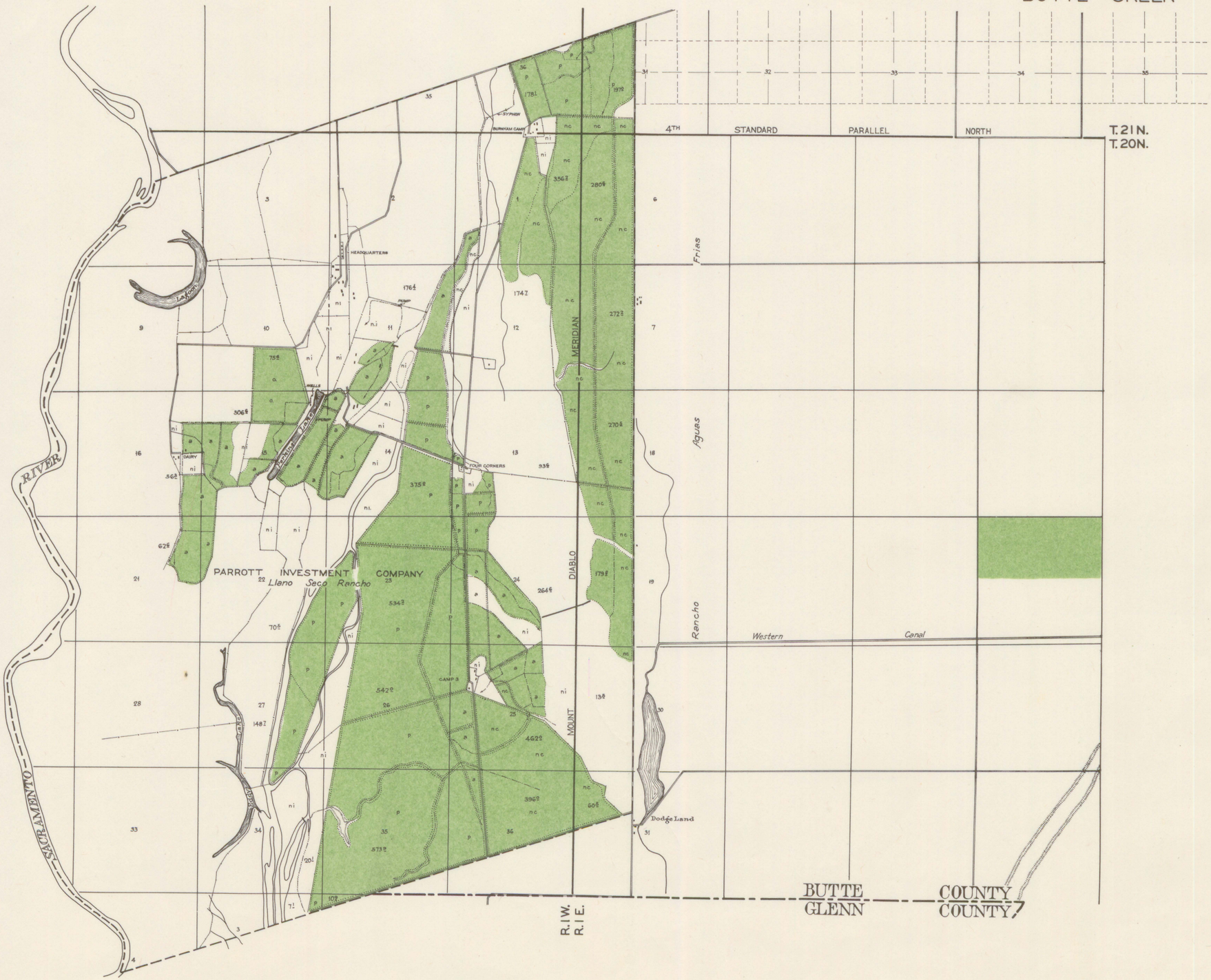
Prepared from U.S.D.A. aerial photographic reproductions-1937

Map Sheets 1 to 6 Scale 1 inch = 4400 feet.

CROP LEGEND

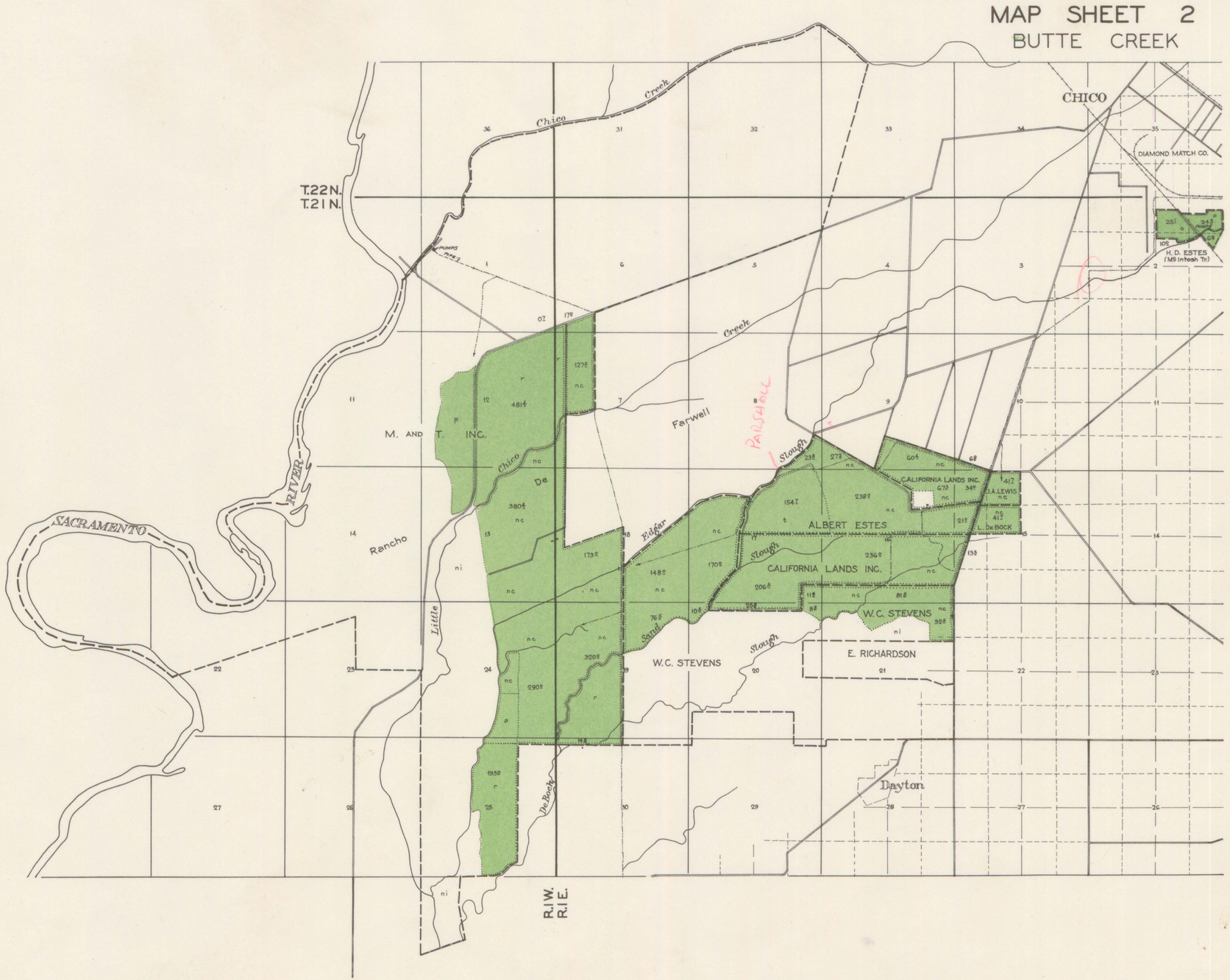
a - Alfalfa, Clover, Sudan
g - Barley, Oats, Rye, Wheat, Corn
o - Orchard, Vineyard
t - Garden Truck, Beans, Beets
r - Rice
mp - Meadow Pasture
p - Pasture
nc - No Crop (1939 Season)
ni - Not Irrigated

MAP SHEET 1
BUTTE CREEK



MAP SHEET 2

BUTTE CREEK



MAP SHEET 3
BUTTE CREEK

T. 22 N.
T. 21 N.

T. 21 N.
T. 20 N.

R1E
R2E

Oroville
Chico
Paradise
Esquon
Durham
Nelson
Western Canal
Butte Slough
Butte Creek
Dry Creek
Honcut Creek
Feather River
Table Mountain
Gorrill Ridge
Stutter Ridge
Ridge
Rancho
Ayres
Fries
Stutter

RAILROAD
NORTHERN
SOUTHERN
PACIFIC
ELECTRIC

PARROTT INVESTMENT CO.
CALIF. LANDS INC.
DURHAM MUTUAL WATER COMPANY
ADAMS et al.
E. L. ADAMS
R. C. GORRILL
A. WHITE
E. E. WHITE
G. E. McLAIN
L. K. THOMASSON et al.
U.S. PLANT GARDEN
YUBA CONSOLIDATED GOLD FIELDS
A. F. LIEURANCE
D. HALE
B. COMPTON
C. W. BAXTER et al.
HOOK BROS.
E. JACKS
E. A. CARLSON
S. A. ATKINS
J. VON SATTEN
M. E. SOTH
WEST SENTLER
S. VERNOCA
B. SETIVA et al.
J. WHEELDON
PT. LAND BANK OF BERKELEY
STATE OF CALIFORNIA

MAP SHEET 4
BUTTE CREEK

T.23N.
T.22N.

R3E.
R4E.

PARADISE IRRIGATION DISTRICT

C.O. DOWNS
L.L. DOWNS
G.H. MATHEWS
W.H. WALKER
E.L. HAMILTON
VANDEGRIFT TRUST
P.G.&E. CO
S.A. VANDEGRIFT
DIAMOND MATCH CO.
Magalia Reservoir
Magalia Ditch
Dingee Canal
D.A. & W.S. HOOK
J. SAGH
D.L. JACOBS
C.N. SWARTZ
E. WILLEGETT
E.K. ROBBINS
Nimshew
Centerville Canal
S.C. SORENSEN
C.M. ARCHEN
S.A. VANDEGRIFT
J.J. COOPER
E.H. FERGUSON
F.E. WHITLOCK
Magalia Ditch
H.M. WHITTEN et al
A.E. SMITH
J.L. POST
H.C. BELDEN
Forest Ditch
Erin Ditch
Butte Creek
Paradise
Centerville
Honey Run
Butte Creek
ELECTRIC MINING CO.
E.G. EVERS
F.M. McENESPY
H.W. & A. SKILLIN
E.H. MANN
H.D. MARCH
B. CLARK
G.E. & C. MILLAN
Chico

MAP SHEET 5
BUTTE CREEK

T.26N.
T.25N.

T.25N.
T.24N.

T.24N.
T.23N.

R3E.
R4E.

Stirling City

THE DIAMOND MATCH COMPANY

A. SPANGLER

EST. OF E. DUENSING

C.H. MATHEWS

VACANT

C.D. WEBB

CREWE

J.J. OLSEN

L.H. MCLAIN

C. MCLAIN

M.A. SMITH

Butte Creek

Little Butte Creek

Yankee Hill Canal

Inskip Canal

Hendricks Canal

Powellton

Inskip

Clear Creek

Dry Creek

Keefer Slough

Mud Slough

Weber Creek

Mill Race

Feather River

Western Pacific R.R.

MAP SHEET 6

BUTTE CREEK

R.3E.
R.4E.

R.4E.
R.5E.

TEHAMA CO.
BUTTE CO.

BUTTE COUNTY
PLUMAS COUNTY

Colby Creek

Butte Creek

Jones Creek

Willow Cr.

Malley Creek

Bolt Creek

Cirby Creek

Feather River

West Br.

Coan Hollow

J.H. LUCAS et al

W. KENNEDY et al

J.H. LUCAS

F.K. MICKEY & J.H. MINDERMAN

Jonesville

U.S. FOREST SERVICE

THE DIAMOND MATCH COMPANY

J.H. LUCAS et al

W.J. McGANN et al

Butte Meadows

DAVIS

TRACY

O.M. CRITCHFIELD

A.E. MILLS

G. TAYLOR

U.S. FOREST SERVICE

J.G. WILLIAMSON

E. CUSSICK

C.C. KAUFMAN

A. HOUGHLAND

L.B. STEPHENSON

E.L. FRANKS

J.J. MAHAN
W.J. DOYLE

T.26N.
T.25N.